

Contents



The 36th Annual Research Extension and Community Engagement Review Workshop was conducted at Haramaya University from 28-30 March 2019. The workshop provided a platform to share experiences among stakeholders and discuss better ways for increased cooperation and synergy among the university, governmental and non-governmental organizations, Farmer Training Centers (FTC), Model Farmers, Cooperatives and Unions and members of the community. **Page 4**

Two New Groundnut Varieties Released

Groundnut is one of the cash crops produced in Ethiopia due to its market values.

Groundnut variety coded "ICGV-95469" was *Aspergillus flavus* tolerant and less aflatoxin accumulation. At NVT stage, the material was tested under national variety trial for two subsequent cropping seasons from 2015-2016 at three locations: Babile (Haramaya University), in collaboration with Pawe, and Werer Research Centers. The variety has a high oil contents, is less invasions at in vitro fungal tests, and no aflatoxin accumulation. **Page 3**



18

EJAS

East African Journal of Sciences indexed in Directory of Open Access Journals (DOAJ)

REALISE

06

REALISing Sustainable Agricultural Livelihood Security in Ethiopia (REALISE) is a three year 2018-2020) Project



Inside.....

- 02 Haramaya University and partners discovered 17 new stem borer species
- 07 **CAGED:**
- 09 ARIHUB: A Project Aspired to Strengthen Entrepreneurial Capacity through Agricultural and Rural Innovation and Incubation Hub
- 10 CHAMPS so far
- 11 Returnees get Support
- 12 Tony Day
- 14 Field Days for Strong Connection with the community
- 26 Government Funded Research
- 27 Our Partners



Tony Farm

Haramaya University and partners discovered 17 new stem borer species

Haramaya University researchers in collaboration with colleagues from the Institute of Research for Development (IRD), National Center for Scientific Research, Paris- Sud University, France and researchers from University of Fort Hare and Walter Sisulu University, both in South Africa, discovered 17 new stem borer species in Ethiopia. The name of the new species originated from collection sites of the stem borers.

Dr. Muluken Goftishu, lead researcher, explained that “The findings were published in internationally renowned journals and contribute indispensable knowledge to the global taxonomy network. In identifying the new species, both morphological markers, and molecular phylogenetic and molecular species delimitation analyses on a multi-marker molecular dataset were carried out.”

“Alongside with butterflies, moths belong to the second largest order of insects known as Lepidoptera. Even though more than 180,000 species of Lepidoptera have been described globally, many more remain undiscovered, particularly in Africa, being insufficiently studied,” notes Dr. Muluken.

All of the 17 new stem borer species discovered by Haramaya University and collaborators belong to order Lepidoptera of the family Noctuidae, commonly known as moths. Its members are plant herbivores and few of the species are considered as pests while the vast majority of the species are still found in wild host plants. With the exception

of few species, almost all African lepidopteran stem borer pests are indigenous insects that expanded and/or switched their host ranges to cultivated plants (maize, millet, sorghum and sugarcane) and emerge as a pest upon exposure to anthropogenic habitat disturbances. Even if the newly discovered stem borer species are not yet recorded from cultivated plants in Ethiopia, with the loss of natural habitats those species that are currently restricted to wild hosts- grasses and sedges, may have the potential to shift to cultivated plants.

Contrary to their pestiferous effect on cultivated plants, moths are important nocturnal plant pollinators. Larval and adult moths are significant food sources for natural enemies (parasitoids and predators), birds, and other organisms higher in the food chain. Moreover, moths have been identified as important bio-indicators for assessing biodiversity and monitoring ecosystem responses to environmental perturbations. Accordingly, moths can be useful bioindicators of environmental disturbances through changes in species diversity.

“Our studies suggest that many more species of stem borers may be reported if this kind of study covers Combretum-terminalia woodland ecosystems of western and north-western Ethiopia, particularly known for their diverse species of grasses and sedges. The newly recorded stem borer species could possibly be endemic to the country as Ethiopia is one of the principal centers of origin and diversity for many animals and plants,” notes Dr.

Muluken.

The researchers have named some of the newly discovered stem borer species in honour of the locality where the species were found:

- *Acrapex alemura*, a species found in Southern Nations, Nationalities, and Peoples’ Region (SNNPR), Sidama Zone, near Hawassa town in a small village called Ale Mura, has been named after the village.
- *Acrapex abyssinica*, a species found in Oromia region, Central Ethiopia, Sululta town, has been named after the old Ethiopian Empire.
- *Acrapex robe*, a species found in Oromia region, West Arsi Zone- Adaba and Bale- Robe, has been named after the zonal center of Bale Robe.
- *Acrapex soyema*, a species found in Oromia region, near Gibe river in a small village called Soyema, has been named in honour of the village.
- *Acrapex wondogeneta*, a species found in Oromia region, Arsi Negelle and Sululta, and in SNNPR, Sidama Zone, Wondo Genet district, has been named in honour of the district.
- *Acrapex zima*, a species found in SNNPR, Dawro zone, near Gibe II hydroelectric dam in a small village called Zima, has been named after the village

Two New Groundnut Varieties Released

Groundnut is one of the cash crops produced in Ethiopia due to its market values. However, Ethiopia is nowadays not exporting groundnut to the international market due to poor quality and aflatoxin contaminations beyond the international and regional tolerable limits. On top of this, the local supply is limited and the demand for groundnut is high, evidently some of the food processing companies located in Addis Ababa and Dire Dawa are importing groundnut from abroad such as India and South Africa. For addressing problem related to groundnut production and marketing in Ethiopia, the National Groundnut Program based at Haramaya University is conducting various research activities across the country in collaboration with Regional and Federal research centers. Thus, the program led by Dr. Abdi Mohammed and his team, recently released two groundnut varieties.

Groundnut variety coded “ICGV-95469” was *Aspergillus flavus* tolerant and less aflatoxin accumulation. At NVT stage, the material was tested under national variety trial for two subsequent cropping seasons from 2015-2016 at three locations: Babile (Haramaya University), in



collaboration with Pawe, and Werer Research Centers. The variety has a high oil contents, is less invasions at in vitro fungal tests, and no aflatoxin accumulation.

This variety has improved the deficiencies of the varieties in current use. It has higher grain yield, foliar disease resistant, *Aspergillus flavus* and less aflatoxin accumulations, which are the main groundnut production constraints globally and locally in Ethiopia. This variety is recommended for lowland to mid altitude areas similar to Pawe, Werer and Babile. It is an ideal groundnut variety for small scale, mixed small

holder and large-scale commercial, pastoral, agro-pastoral production systems. Furthermore, the new variety can be exported as it has less aflatoxin accumulation capabilities.

In the same year, the variety with its scientific code “ICG67XBIG-SEED” was proposed for confectionery. Both varieties were planted in the same locations and same cropping season for different merits. Finally, both varieties were approved by the national variety release committee in its meeting held in Addis Ababa from November 6-7, 2019. Seed multiplication and demonstration will be conducted in various parts of Ethiopia including, Babile (Haramaya University), Pawe and Werer research centers. Besides, it can be used by, the National Groundnut Programs, groundnut growers and any food processing companies.



Engaging Communities in Extension and Community-centered Activities: The 36th Annual Research Extension and Community Engagement Review Workshop

The 36th Annual Research Extension and Community Engagement Review Workshop was conducted at Haramaya University from 28-30 March 2019. The workshop provided a platform to share experiences among stakeholders and discuss better ways for increased cooperation and synergy among the university, governmental and non-governmental organizations, Farmer Training Centers (FTC), Model Farmers, Cooperatives and Unions and members of the community.

Dr. Jemal Yousuf, President of Haramaya University, in his opening speech indicated that Haramaya University is pioneering extension activities in the country with the university starting extension activities even before Ministry of Agriculture. Haramaya University is currently undertaking many research and extension activities in broader areas and it is difficult for the university to achieve its targets without the involvement and support of the wider community in its surrounding. The first day of the workshop was named a 'Community Day' and saw more than 450 Model farmers and members of the surrounding community. On this occasion, extension



activities that undertook in East and West Hararghe zones of Oromia Regional State, Harari Regional State and Dire Dawa Administration were presented in great detail. Activities and plans of various collaborative projects were also presented. Community services offered to the local community were also presented.

The second and third days were devoted to scientific presentations. H.E. Mr. Raphael Morav, Israeli Ambassador to Ethiopia, Burundi and Rwanda, was among the special guests on the second day. His Excellency de-

scribed Israeli's experience in integrating technology into agriculture to enhance its economy. Mr. Morav further indicated that Ethiopia is a country with potential to further its advancements in agriculture and improved agricultural technologies.



In addition to the research activity reports and introduction of new projects, research projects funded by four categories of research grants were peer reviewed.



CAGED: CAMPYLOBACTER GENOMICS AND ENVIRONMENTAL ENTERIC DYSFUNCTION

Under-nutrition is an underlying cause in 45% of under-five mortality globally, and consumption of animal source foods (ASF) is crucial for nutritional health and livelihood of 600 million smallholder farmers in low- & middle- income countries (LMIC). However, emerging evidence indicates that a high prevalence of *Campylobacter* infection exists among children in these settings, which leads to impaired gut health and growth, and may undermine the benefits of ASF consumption. Little is known about the reservoirs and transmission pathways of these bacteria in rural communities in LMIC.

This research aims to gain insight into species composition, genomic diversity, and attribution to livestock reservoirs of *Campylobacter* spp., and associations between these bacteria and overall gut microflora, and health status of children from rural smallholder families.

Initial Study

Prior to a longitudinal study, a formative, cross-sectional study, was conducted in rural eastern Ethiopia to assess the prevalence of stunting, environmental enteric dysfunction (EED), and *Campylobacter* colonization in young children, as well as to characterize the socio-demographic background. Among the 102 sampled children aged 12 to 16 months, approximately half were colonized by *Campylobacter*, and EED biomarkers were elevated in half of them. In most children, the infections were asymptomatic (not accompanied by diarrhea and/or fever). The prevalence of stunting was higher than the Ethiopian national average. Breastfeeding was common, and more than half of the chil-

dren consumed some animal source foods (mainly milk), but the diversity of complementary foods was low. Water, sanitation, hygiene, and management of animal droppings were poor. Metagenomic analyses revealed a high diversity of *Campylobacter* species in the children's gastrointestinal tracts. Besides the well-known species *Campylobacter jejuni* and *C. coli*, other species related to *C. fetus* and *C. hyointestinalis* were observed frequently and in high abundance. Very little is known about the reservoirs and transmission pathways of these species. Based on limited knowledge from high-income countries, we hypothesize that livestock, including chickens and ruminants, are important reservoirs.

Longitudinal Study

The initial hypothesis is that chickens were the main reservoirs of *Campylobacter* colonization of young children was not fully confirmed by the formative research findings. Ruminants may also be an important reservoir and even human-human transmission cannot be excluded. a prospective longitudinal study will be conducted to assess the fecal-oral transmission network of *Campylobacter* bacteria in our study area and to quantify the role of livestock in this transmission.

The longitudinal study will be undertaken to address the following objectives:

- To assess the prevalence, species composition and genomic diversity of thermotolerant and non-thermotolerant *Campylobacter* species in human samples

(young children and adults).

- To assess the prevalence, species composition and genomic diversity of thermotolerant and non-thermotolerant *Campylobacter* species in livestock and other reservoirs (drinking water, soil).

- To determine the attribution of *Campylobacter* infections in young children to humans, livestock and other reservoirs (drinking water, soil) based on the genetic population structure of *Campylobacter* species circulating in these reservoirs and humans.

- To determine the relationship between *Campylobacter* spp., gut microbiota, EED and linear growth of children.

This longitudinal study will involve 120 children followed from birth to 18 months of age from 12 kebeles in rural eastern Ethiopia. A range of microbiological methods will be used to characterize the genetic structure of the *Campylobacter* population in human and animal reservoirs. Interactions between *Campylobacter* colonization and overall gut microflora in the children against a background of the socio-demographic environment will also be evaluated.

Link to EXCAM

Given the unique opportunity of owning a well-characterized cohort of young children from the CAGED project, the EXposure Assessment of *CAMPylobacter* Infection in Rural Ethiopia (EXCAM) project is a study aiming to unravel pathways of children's exposure to *Campylobacter* spp. and development methodology that supports measurement and quantification of exposure.

The REALISE Project: A New Project that targets PSNP Communities

Realizing Sustainable Agricultural Livelihood Security in Ethiopia (REALISE) is a three year (2018-2020) project and is one of the program port-folios under the Bilateral Ethiopia - Netherlands Effort for Food Income and Trade (BENEFIT) partnership. It aims to strengthen the resiliency of chronically food insecure households through promoting agricultural technologies, primarily targeting productive safety net programme (PSNP) beneficiaries.

REALISE program aspires to enhance human, organizational and institutional capacities to adapt, validate and scale best fit practices to improve the resilience of chronically food insecure households in PSNP woredas”.

Towards achieving the targets, REALISE Haramaya University cluster is working in nine PSNP woredas of east Hararghe, in a total of 36 kebeles (4 kebeles per district). Two of these are considered as research woredas (Meta and Kombolcha) where REALISE validates BFPs and conducts pilot activities and special studies, while the remaining seven (Bedeno, Dader, Fedis, Gurawa, Haramaya, Kersa and Jarso) are scaling woredas where the focus is on scaling of tested and validated best practices.

The project commenced its implementation in 2018 by identifying the major problems constraining agricultural productivity in the selected localities through Participatory Ru-

ral Appraisal (PRA). Based on the prioritized problems through PRA, thematic areas and specific activities were identified for intervention for each woreda and kebele. In 2019 cropping season, several activities were implemented under six different thematic areas (crop productivity improvement, nutrition sensitive agriculture, seed, capacity building, resilience building, and future scenarios). In this issue of the Newsletter, crowdsourcing and participatory variety selection (PVS) activities conducted on three crops (sorghum, common bean, and fenugreek) are described and the major findings of the PVS trials are presented.

Crop Variety Diversification in PSNP Districts of East Hararghe: PVS and crowdsourcing of sorghum, common bean, and fenugreek varieties

In 2019 cropping season, 31 common bean varieties (food and market types), 11 late maturing and 7 early maturing sorghum varieties, and 7 fenugreek varieties released from different research centers in Ethiopia were evaluated in crowdsourcing and PVS trials with full participation of framers throughout the crop growth stages. A total of 2250 farmers (50% women) were directly addressed through crowdsourcing in 17 kebeles of 8 districts. The respective PVS trials of the three crops were conducted on a total of 26 Farmer Training Centers (FTCs). Here, brief highlights of sorghum and common bean PVS results are presented.

From the late maturing sorghum varieties, Dibaba, Jiru, Adele, Chelenko, and Muyra-2 gave higher yields and better overall performances than the local cultivars. They also got farmers' ac-



ceptability scores ranging from 79% to 100% across several kebeles in different districts, except Muyra-2 which had acceptability score of less than 50% and thus rejected. The four varieties (Dibaba, Jiru, Adele, and Chelenko)

include tall plant height (i.e., high biomass) & early maturity compared to the local cultivars. Thus, these varieties are recommended for scaling up in mid to high altitude PSNP kebeles of east Hararghe starting from 2020.

From 25 food type common bean varieties evaluated, SER-119, Tinike, Babile, and Biofort-large (+Fedis as an alternative) are recommended for scaling up either for sole planting or intercropping with maize/sorghum. These varieties gave yield advantages ranging from 20 to 80% over the local checks across kebeles with acceptability scores of 80 to 100%.

Late maturing sorghum



Variety	Mean yield (t/ha)	% yield increase over local check
Dibaba	4.63	137.89
Jiru	4.24	117.89
Adele	3.63	86.43
Chelenko	3.11	59.95
Muyra-2	2.91	49.67
Local	1.95	-



Early maturing sorghum varieties



Common Bean PVS

Development and Delivery of Biofortified Crops at Scale (DDBIO)

Haramaya University in collaboration with the International Potato Center (CIP) initiated a project entitled “Development and Delivery of Biofortified Crops at Scale (DDBIO)”. The financial support for the project was from The Government of the United Kingdom of Great Britain and Northern Ireland acting through the Department for International Development (‘DFID’).

Eastern Ethiopia is one of the regions where recurrent drought leading to crop failure and chronic malnutrition of Fe, Zinc, and Vitamin A are among the major problems of rural community. Vitamin A deficiency (VAD) for instance is a serious health problem in most communities in Ethiopia, particularly affecting, young children and mothers. The deficiency is reaching alarmingly high proportions in some regions of the country. Different strategies have been used to control VAD which include vitamin A supplementation of large doses in the form of capsules, fortification of commonly consumed food items such as oil, sugar, breakfast cereals and grain flour; and dietary diversification.

In Ethiopia, nearly 20 million peoples are dependent on sweet potato as a staple food, reflecting the importance of the crop for food security and the livelihoods of rural communities. The crop is mainly grown in two regions, namely Southern nation nationalities people’s region and Oromia region (predominantly east and west Hararghe zones). Farmers in Hararghe confirmed that the crop best performs under harsh environments where other staple food crops such as maize and sorghum regularly fail due to erratic rainfall and recurrent droughts. Currently, in Hararghe, sweet potato

to production especially the orange fleshed one is increasing due to its importance as a bridge crop during time of food shortage, source of animal feed and significant contribution to food and nutrition security.

Biofortified orange fleshed sweet potatoes are relatively cheap and easily accessible sources of vitamin A to combat the problem of VAD in Ethiopia in general and Hararghe in particular. In line with this, breeding effort is made at Hawassa Agricultural Research Center to develop OFSP varieties and recommended for production in Ethiopia. Those varieties are rich in Vitamin A, high root dry matter content, drought tolerant and ideal to grow as climate- and nutrition-smart crop in drought prone areas of Hararghe zones where other crops failed to perform.



This project mainly focuses on developing new biofortified sweet potato varieties through existing breeding programs or introduction and popularization of developed ones; supporting the development of new and sustainable delivery models for scaling biofortified sweet potato, including new public private partnerships and cost-effective delivery models in protracted crises environments; and strengthening the evidence base on

the impact of biofortified sweet potato, and ensuring biofortification is included in international, regional, and national policies, plans, and programmes. The project targets to benefit 700,000 women at child-bearing age, adolescent girls, and children under five in eastern Ethiopia in the coming three years. So far, the project has introduced seven OFSPs (four improved and three in pipeline) and started vine multiplication for distribution and multiplication using participatory variety evaluation for agronomic and post-harvest quality traits.



In addition, development of different OFSP based food products and promotion to rural and urban consumers has been started to create awareness and demonstration on processing and food preparation method.

ARIHUB: A Project Aspired to Strengthen Entrepreneurial Capacity through Agricultural and Rural Innovation and Incubation Hub

Strengthening Entrepreneurial Capacity through Agricultural and Rural Innovation Incubation Hub at Haramaya University (ARIHUB) is inceptioned on August 2019. It is 2 years project funded by RUFORUM and Master Card Foundation. The main goal of this project is to enhance innovation and entrepreneurial capacity of students and other stakeholders through strengthening agricultural and innovation hub at Haramaya University.

The Principal Investigator of ARIHUB, Dr. Getachew Shambel explained that, the aim of this project is to strengthen Haramaya University's Agriculture Innovation Hub (HUAIH) through education, training,

and research facilities to transform the entrepreneurial capacity of young graduates through coaching and behavior change communication (mentorship). The project also aims to enhance collaboration and partnerships between and among the HUAIH, private sector, Small and Micro Scale Enterprises and Community Based Organizations using Multi-stakeholders Innovation Platform Approach.

Moreover, the project is expected to enhance innovation and entrepreneurial skills of students and create linkage between public and private sectors to increase employment opportunities for graduating students. ARIHUB is expected to be fully operational and start training undergraduate students, local women and youths on entrepreneurship and small agri-businesses in April, 2020

“The main goal of this project is to enhance innovation and entrepreneurial capacity of students and other stakeholders...”



CHAMPS Ethiopia- So Far

The Child Health and Mortality Prevention Surveillance (CHAMPS) project took roots in Harar and Kersa towns. The project is working on the promotion of healthy lifestyle and mortality prevention of children under-5 in Kersa, Watar and Harar.

The project employs the two-sided approach, namely the social and behavioural science team and the clinical team to sensitize the community about the scientific implementations and activities of clinical team.

Social Science team has been working on radio programme since 2019. CHAMPS Ethiopia in collaboration with Haramaya-Fana FM radio station is broadcasting a programme on Maternal and Child Health, a show focusing on women and children related issues to improve the community's awareness. It is being broadcasted in both Affan Oromo and Amharic languages. Listening groups have been organized in Watar, Kersa and Harar sites so as to know the reflection of the community living in these sites.

In a continued effort to understand the child and maternal mortality, Social Science team hosted an international symposium under the theme "Anthropological approaches to understand child and maternal mortality, and recommendations for improving health outcomes in Ethiopia." Scientific papers were presented and recommendations were forwarded on the issue.



Theatre for development (TfD) performance on community experiences of still birth, introducing CHAMPS, MITS and data to action were done in this year. Actors of the performance are community members from Kersa and Harar sites. This is to create a forum for debate and discussion in which the community could talk about their problems and find solutions to the problems.

Based on the approval, to perform Minimal Invasive Tissues Sampling (MITS) obtained from Ethiopian Islamic Affairs Council, CHAMPS Ethiopia commenced the first Min-

imal Invasive Tissues Sampling (MITS) case in early February 2019. Thirty-nine MITS procedures were conducted so far. The procedure was performed by the clinical team to analyse the root causes of child mortality in the country. Meanwhile, MITS and counselling rooms had been built in Kersa Health Centre so as to increase the acceptability of MITS in the community by avoiding body transport from Weter, Lange and Kersa to Harar Hiwot Fana Hospital.

The 4th Scientific Advisory Committee (SAC) meeting was conducted in this reporting year at the Ethiopian Public Health Institute.



Besides the clinical procedures, Applied Social and Behavioural Researches on the perception and attitude of the community about MITS were conducted



The findings of the rapid assessments indicated that community engagement activities were the most recommended action as a solution to lighten perception of the community and increase acceptability of MITS.

The first DeCoDe panel was conducted on September 2019. The panel included training organized by Emory University. Prof. Rob Breiman (Emory CHAMPS PI), Prof. Anthony Scott (LSHTM CHAMPS PI), Dr Diana Blau (International Lab Director for CHAMPS), HHR staff and external experts from Ethiopian Universities and Hospitals were participants of the panel.



A total of 12 cases were reviewed and the final cause of death was decided for 11 cases. Results had been communicated for respective families and stakeholders accordingly.

University Supports Returnees

Haramaya University distributed improved Maize and Sorghum varieties to farmers who were displaced from nine kebeles of Babile district. Improved seed distribution was a part of IDP reintegration endeavor for people who returned to their place of origin.

Awsherif and Errer Ebada Kebeles respectively, said that even though the area they live in is a dry land, maize and sorghum varieties the university provided are drought resistant and productive.



As a partner in reintegration endeavor and changing the lives of Internally Displaced People, the Vice-president for Research Affairs Office distributed 266 Quintals of improved Maize and Sorghum seed varieties investing more than 750,000 Ethiopian Birr for 2128 IDPs from Babile district.

Recipients of improved seed varieties explained that the support Haramaya University offered has improved their productivity. Mr. Shemsedin Mohammed, Abdi Reshid and Abdi Yassin Shikur, beneficiaries from Gemechu,

Haramaya University saw we were in trouble, because of the displacement, and come to our aid. They expressed their gratitude for what the university has been doing and asked the university to continue its support and expert follow-ups.

IDP reintegration program through improved farming activities is among many research and extension engagements the university has been working on.



Office Celebrated Tony Day

Office of the Vice-president for Research Affairs celebrated Tony Day for the fourth time on July 5, 2019 at University Research Center conventionally known as Tony Farm located at Dire Dawa. The office organized this event in order to appreciate the workers for their hard work and to deliberate on issues of concerns. According to Mr. Shibiru Wakjira, Dire Dawa Tony Farm Site Manager, this year the center has been working aggressively on the irrigation project undertaken to utilize underground water resources. The site serves as a research site and demonstration field for Haramaya University researchers and students as well as different project stakeholders. And many projects, regional agricultural offices and organizations work-

ing on agriculture and related fields have taken seedlings and variety of crops, vegetables and fruits from the center.

A discussion was also held with the farm workers on the day. Issues of scholarships, promotion, border issues with Dire Dawa University and overtime payments and some challenges that women workers have been facing were some of the issues raised by the farm workers. Mr. Admekew Haile, Delegate Vice-president for Research Affairs and Dr. Awol Seid, Director for research group and partnerships responded to the questions and promised to report some of the issues raised to the university authorities.



Field Days for Strong Connections

The Vice-president for Research Affairs has organized field days in Kurfa Chele, Grawa and Rare Research centers. The events were organized with the intention of maintaining strong relations among researchers, experts and the local community. In August 2019, Vice-president for Research Affairs organized the second field day of the year at Kurfachale and Gurawa research centers.

Haramaya University has been conducting multiple researches on animals, fruits, and different crop varieties for different geographical locations and weather, aiming at producing improved, locally appropriate, diseases and drought resistant varieties.

Researchers are working on improved animal breeds including chickens, bulls and goats. On the day, 3 poultry houses were distributed to women in Kurfa Chele research center.



In addition to conducting studies, research stations introduced new crops to the community. Chaya, a spinach variety and multi-purpose edible plant, was introduced to the Hararghe community by Haramaya University researchers in 2019. Dr. Wassu Mohammed, one of the researchers in the university, said “Chaya would help us to solve the nutrition problem we have been facing as a nation and in Hararghe. Its high Iron and Calcium contents made it an ideal vegetable for Children and mothers.” Meanwhile, Mr. Daniel, lead investigator of Chaya project, offered explanations about Chaya and Sweet potato and explained the nutritional values for children and mothers. Gurawa was

ction with the Community



the second destination, where multiple researches are in progress. At this center, researchers reported Apple hybrids and improved Potato varieties are in progress. On the occasion, improved apple seedlings were distributed to 10 farmers. To this date, several beneficiaries received improved Apple seedlings.



Mr. Admekew Haile, Delegate Vice President for Research Affairs, discussed with the youth and community members in Gurawa. “Haramaya University strives to improve the lives of farmers through researches, innovations and extensions,” said Mr. Admekew. “And field days serve as a platform for researchers to discuss the needs of community they serve and possible ways to address issues of concern, alleviate poverty and support the country’s development in accordance with the University’s mission.”

During the field day, researchers and community members planted more than 100 plants at Kurfa Chele research center as a part of the national Green Legacy campaign.

The second annual field day was celebrated at Haramaya University’s Main Campus at Rare research center.

Model farmers, researchers and stakeholders during the field day visited various research activities at Rare and HU poultry farm.

“Haramaya University strives to improve the lives of farmers through researches, innovations and extensions,”





Currently, Haramaya University is engaged in 189 research projects; which target at producing disease and drought resistant as well as locally appropriate technologies. These projects focus on improving crop production, natural resource conservation, livestock production and innovative agricultural technologies to alleviate the food security problem the country has been facing in general and Haraghe in particular.

Ms. Hoden Mohammed, agricultural extension worker in Haramaya district Ifa Bate Kebele, said that the university has been disseminating improved varieties of Sorghum, maze and potato. These improved seeds are drought resistant and have been helping us in improving the farmers' productivity.

Meanwhile, beneficiaries from different districts of west and east Hararghe zones explained that the improved seeds the university disseminated have been more productive than the seeds they used to cultivate. Ato Zeko Abraham, a

beneficiary from, Haramaya district Karo Deda Kebele said that "the maze and sorghum varieties the university offered us are drought resistant and yielded more production within a short production period." Mohammed Aliyi Orihe, beneficiary from west Hararghe Zone, Doba district, Beha Adu Kebele Farmers Association said, "In addition to resistance to drought, the productive nature of the sorghum and maze varieties, we are using the steam for cattle feed, which is of great help to diversify our livelihood."

Dr. Chanyalew Seyoum, Research Extension and Publication Directorate Director, said that "Haramaya University has been actively involved in disseminating agricultural technologies for the last six decades. Technology transfer has been the university's key function as a part of teaching and community engagement activities." He reaffirmed that, the university will continue disseminating



EA

East African Journal of Sciences indexed in Directory of Open Access Journals (DOAJ)

S



East African Journal of Sciences [EAJS] is a multidisciplinary and international journal published bi-annually by the Research Extension and Publication office of Haramaya University. It has been publishing peer reviewed research articles for 13 years. During this period, the journal has been used as a means for sharing knowledge and technologies to users. The journal has been indexed in African Journals for several years. Application was lodged to DOAJ by the publication officer of the University for indexing the journal. DOAJ is known for whitelisting peer-reviewed journals of international stature. This provides an opportunity for increasing the visibility of articles published in this journal globally and its international acceptance across the globe. Following the application, a rigorous review was made by DOAJ, and it has been recently accepted for indexing EAJS.

The office of Director for Research Extension and Publication appreciates the efforts made by the editorial board of EAJS, reviewers and other actors involved for this success. The office encourages scientific community in and outside the country to submit their original research articles, review papers, variety registrations, and short communications to EAJS. The submission to this journal can be made online. Visit us on: <https://tinyurl.com/EJAS2019>

DOAJ

DIRECTORY OF OPEN ACCESS JOURNALS



Jemal Yousuf, PhD, HU President

“Haramaya University is pioneering extension activities in the country with the university starting extension activities even before Ministry of Agriculture”



Empowering Women Farmers



750K ETB

Seven Hundred and Fifty Thousands Birr

...The Vice-president for Research Affairs Office distributed 266 Quintals of improved Maize and Sorghum seed varieties investing more than 750,000 Ethiopian Birr for 2128 IDPs from Babile district...



High levels of
investment in R&D

Innovation in water
related technologies

[Back to content](#)

HARAMAYA UNIVERSITY

th Annual Research, Extension, and Community
Engagement Review Workshop

28-30 March 2019

Hall and Resource Center

Basis for Development!

H.E. Mr. Raphael Morav, Israeli Ambassador to
Ethiopia, Burundi and Rwanda,

“Ethiopia is a country with potential to further its advancements in agriculture and improved agricultural technologies.”

189

Research Projects

...Currently, Haramaya University is engaged in 189 research projects; which target at producing disease and drought resistant as well as locally appropriate technologies.

These projects focus on improving crop production, natural resource conservation, livestock production and innovative agricultural technologies to alleviate the food security problem the country has been facing in general and Haraghe in particular...

Numbers



700K

“Development and Delivery of Biofortified Crops at Scale (DDBIO)”.

Seven Hundred Thousands

targets to benefit 700,000 women at child-bearing age, adolescent girls, and children under five in eastern Ethiopia in the coming three years.

Government Funded Projects in 2019/ 2020

Major Research Themes	Grant Category					Total
	Regular Research Grant	Women's Research Grant	Innovative Research Grant	Knowledge Transfer Grant	Special Support Grant	
Theme I: Productivity and Environmental Sustainability for Food Security	15	1	2	1	16	35
Theme II: Human Health Nutrition and Welfare	7	1	0	1	0	9
Theme III: Energy, Engineering and Information Technology	6	0	3	1	0	10
Theme IV: Human and Social Development	6	1	0	0	0	7
Theme V: Institutions, Innovation systems, and Economic Development	4	0	0	0	0	4
Theme VI: Basic Science Research	4	0	1	1	0	6
Total	42	3	6	4	16	71

We are working in partnership with;



COLLABORATORS OF
EXTERNALLY FUNDED PROJECTS

