



THE THIRD UGANDA NATIONAL AGRICULTURAL EXTENSION e-symposium 2020

um for

THEME:

Positioning Agricultural Extension and Advisory Services for Resilient Agriculture and Food Systems

20th-30th JULY, 2020













Organised by: Uganda Forum for Agricultural Advisory Services (UFAAS)

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ACRONYMS

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EXECUTIVE SUMMARY_



Uganda Forum for Agricultural Advisory Services (UFAAS), in partnership with the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) and other partners, annually organizes National Agricultural Extension Symposia that bring together different actors and stakeholders to deliberate on Agricultural Extension and Advisory Services (AEAS) issues critical to agricultural development.

UFAAS is the Ugandan Chapter of the African Forum of Agriculture Advisory Services (AFAAS), that brings together all Agricultural Extension and Advisory Services (AEAS) actors in Uganda, ranging from: public sector, private sector, academia, including schools, NGOs/civil society, farmer organizations and media. Currently, UFAAS reaches out to over 1,000 actors ranging from public, private and media actors offering extension to Ugandan communities. It is one of the recognized Non State Actors (NSAs) that works within the extension policy framework and closely with the MAAIF and other AEAS actors and stakeholders, to contribute towards the achievement of the national food and agricultural goals and priorities.

Over the years, there have been numerous natural calamities like Covid-19 pandemic, desert locust emergency, increase in floods and landslides, droughts and more that have had tremendous shocks and disruptions on the agriculture and food systems. Hence the e-Symposium Week, with the theme of "Positioning agricultural extension and advisory services for resilient agriculture and food systems". This years symposium conducted from 20th to 30th July 2020, took a form of an e-Event due to the prevailing situation of Corvid 19. The e-Symposium hosted synergetic Webinars, discussions on different media channels, launch of the e-Registration for AEAS actors, among others.

The purpose of this year's symposium was to provide space for the different AEAS actors and stakeholders to deliberate on how AEAS can effectively and efficiently contribute to national agriculture and food systems, amidst the natural calamities of Covid-19, floods, landslides, desert locusts and others. **The objectives** of Symposium 2020 were to: 1) find out how the disruption and shocks of the natural calamities have affected the agriculture and food systems in Uganda; 2) find out the different coping and thriving strategies adopted by the different AEAS actors and stakeholders to ensure that they perform; 3) identify the new opportunities manifesting out of the disruption and shocks of the natural calamities; and 4) come up with recommendations for priority changes within the "new normal".

The Planned Sub-themes that informed the main theme were: 1) Climate Smart AEAS-Capacity and needs of actors; 2) Mainstreaming Sustainable Land Management in AEAS; 3) Youth Engagement in AEAS and Agri-preneurship-as providers or clients; 4) Emerging Competitive e-extension Models; Public and private AEAS for Animal and Fisheries Sectors and 6) AEAS support to Urban and Peri-Urban Agriculture. There were also other presentations in line with main theme that focused on the topics of: Positioning of Agricultural Extension education for resilient agriculture and food systems; Experiences of agricultural inputs provision with extension Services; and Farmers Perspective on the effect of the current vulnerabilities

The expected outputs from the event were: A report on the positioning of AEAS for resilient Agriculture and food systems; Different extension approaches, practices and models presented and discussed; At least one (1) policy brief and/or a communique; Capacity of participants enhanced in the different thematic areas and use of e-platforms; Networking and information sharing; and e-Registration of national extension actors launched and operation. The Overall intended outcome of the symposium was to have the position of AEAS strengthened within resilient agriculture and food systems throughout the country and beyond.

This NationalAgricultural Extension e-symposium was conducted using a rich and broad range of e-participatory methodologies and in phases. The methodologies included: webinars, radio jingles, radio talk shows, WhatsApp discussions and regional hub meetings. The phases included: Preparatory or Preliminary; opening, webinars and publicity events; synthesis of results, climax and closing; evaluation, report, communique and policy brief writing and presentation to different stakeholders. It brought together a total of 962 (29 % females) delegates from Uganda and 33 other countries (17 Africa and 16 beyond) mainly members of the Global Forum for Rural Advisory (GFRAS) and Africa Forum for Agricultural Advisory Services (AFAAS) networks. The delegates from Uganda represented diverse sectors including: public, academia, farmers, CSOs, private sector, media and Development Partners. The opening and closing events of the symposium were presided over by the Minister of Agriculture, Animal Industry and Fisheries, Hon. Vincent Bamulangaki Ssempijja (MP) and the Director, Department of Agricultural Extension Services, Mrs. Beatrice Byarugaba.

Various shocks, disruptions, strategies to address, opportunities available and recommendations were presented for each of the subthemes. They also identified opportunities and made recommendations. After synthesizing all these, the folloing recommendations are made to the different actors and stakeholders as follows:

Policy instruments and regulatory framework for effective delivery of AEAS

- 1. Establish an independent mechanism to coordinate and harmonize implementation of issues critical to AEAS policy instruments and enforce their compliance to promote professionalism and accountability of the Agricultural Extension and Advisory system, for example adopt and operationalize the piloted FAO AEAS assessment methodology and measurement of outcomes; the Ethical Code of conduct, Standards and guidelines and e-Registration and accreditation of extension actors.
- 2. Fast track the enactment of National Agricultural Extension Bill 2017 to foster good governance and coordinated operationalization of the pluralistic extension system.
- 3. Formulate a national policy to guide urban and peri-urban agriculture. Urban authorities should include urban agriculture in the physical planning of urban areas, cities and towns and include budgets for supporting women and youth in agricultural programmes.

Integrate approaches and strengthen capacities for scaling up Climate Smart Agriculture

- 1. Coordinate and harmonize efforts of AEAS actors in CSA and strengthen their capacities to participate and contribute to implementation of CSA activities
- 2. Integrate Agricultural and digital technology approaches in Climate Smart Agricultural practices for example Climate Smart Village, Remote Farm Logs Model, Saemal Undung Korean Model, etc.
- 3. Integrate and out scale social protection services like insurance, saving schemes, risk assessments, weather forecast, etc. to mitigate the effects of climate change while promoting active involvement of different stakeholders to adopt and implement proven coping strategies.

Coordinate, Build Capacity and Promote Access of Digital innovations for AEAS use

- 1. Provide a mechanism for coordinating digital innovations and efforts amongst e-extension models players and users to complement conventional extension service system.
- 2. Build the capacity of AEAS service providers, especially the youth in the use of digital innovations, and equip them for effective and efficient service delivery across the commodity value chains.
- 3. The Government and NSA organisations in AEAS should come up with practical ways of equipping their agricultural extension staff with ICT tools and services (e.g. smart phones, laptops and internet to ensure increased access and use of ICT based services by extension actors and beneficiaries (farmers and others) especially the youths.
- 4. Promote youth in Agriculture programmes, bearing in mind the fact that they are not a homogenous group and hence target initiatives and interventions to different categories

Coordinate innovative approaches and AEAS actors for an effective AEAS system

- 1. Coordinate innovative approaches in the management and distribution of agricultural inputs through a wellregulated decentralized last-mile agro-input distribution system.
- 2. Support and strengthen UFAAS to facilitate the coordination of actors and increase opportunities for cross learning e.g. symposium and joint resource mobilization for the diverse AEAS actors.

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1.0 INTRODUCTION



Uganda Forum for Agricultural Advisory Services (UFAAS), in partnership with the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) and other partners, annually organizes National Agricultural Extension Symposia that bring together different actors and stakeholders to deliberate on Agricultural Extension and Advisory Services (AEAS) issues critical to agricultural development. The Ugandan Chapter of the African Forum of Agriculture Advisory Services (AFAAS), brings together all Agricultural Extension and Advisory Services (AEAS) actors in Uganda, ranging from: public sector, private sector, academia, including schools, NGOs/civil society, farmer organizations and media. Currently, UFAAS reaches out to over 1,000 actors ranging from public, private and media actors offering extension to Ugandan communities. It is one of the recognized Non State Actors (NSAs) that works within the extension policy framework and closely with the MAAIF and other AEAS actors and stakeholders, to contribute towards the achievement of the national food and agricultural goals and priorities.

1.1 BACKGROUND INFORMATION TO THE SYMPOSIUM

Globally, Agricultural Extension and Advisory Services (AEAS) systems are of critical priority in helping all actors along the different value chains unleash their potential to contribute to the achievement of the Sustainable SDGs as well as their national goals. In Uganda, the macro level policies guiding AEAS include: the Third National Development Plan (NDPIII, 2020/21-2024/25), the National Agriculture Policy (NAP 2011) and the National Agricultural Extension Policy (NAEP, 2016).

The NDPIII mission is to strengthen the country's competitiveness for sustainable wealth creation, employment and inclusive growth, while the NAP (2011) goal is "a Competitive, Profitable and Sustainable Agricultural Sector" and the mission is to "transform subsistence farming to sustainable commercial agriculture". The NDP II interventions were focused on 12 priority commodities, namely: bananas, beans, maize, rice, cassava, tea, coffee, fruits and vegetables, dairy, fish, livestock (meat), and four strategic commodities, namely, cocoa, cotton, oil seeds, and oil palm.

However, it is always more sustainable to target food and income security of the people concerned, hence also the focus on food systems. The major agri-food systems in Uganda are: crops, livestock, forestry, aquaculture, and fisheries. According to World Bank report (2018) on Uganda's Agriculture and Food System, achieving agriculture productivity growth and resilience will require better technology, tenure security and sound land management practices, as well as the dissemination of knowledge on sustainable input use through effective extension services. The new strategic direction within NAEP, 2016. Is to transform the AEAS from a system of parallel institutionally fragmented public and non-state actors (NSAs) to a well-coordinated, harmonized, regulated pluralistic service with multiple providers addressing diverse needs of farmers and other beneficiaries. The extension policy framework recognizes the non-state actors (NSAs) as a crucial element of the extension system and has inbuilt strategies to develop the capacity of the entire system (both public and private) in a holistic manner

The outbreak of natural calamities like Covid-19pandemic, desert locust innovations, increase in floods and landslides in Uganda have greatly disrupted its food systems but also efforts towards agro-industrialization. Secondly, the environments in which people operate, are rapidly changing in both their external dimensions food availability, prices, vendors- as well as personal dimensions – geographical access, affordability, convenience and desirability. These rapid food environment changes are influencing the consumers' dietary practices and can lead to deterioration in both individual, and country level, nutritional and health status. The impacts on the movement of agricultural labor and on the supply of inputs will soon pose critical challenges to food production, thus jeopardizing food security for all people, and hit hard especially, people living in the poorest countries.

There is therefore need for a deep analysis of the problem to come up with tangible strategies and priorities before the situation reaches to unmanageable levels that will lead to loss of lives and irreversible impacts on the economy.

1.2 OVERVIEW OF UFAAS AND NATIONAL EXTENSION EVENTS

Since 2013, UFAAS in partnership with the MAAIF and other partners has been organizing National Agricultural Extension events that: bring together different actors and stakeholders; provide space for them to deliberate on AEAS issues critical to agricultural development; and come up with communiques, deliberations, policy briefs that have had influence up at policy level.

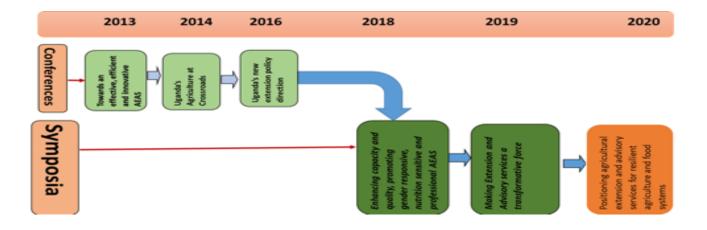
During the earlier years they were called National Conferences

- 2013 Towards an effective, efficient and innovative Agricultural Extension and Advisory Services (AEAS) system in Uganda".
- 2014 Uganda's Agriculture at Crossroads: Critical issues in the Extension and Advisory Services (AEAS) System with a declaration by 124 participants, that had impact on the ag-extension system in Uganda
- 2016 Uganda's new extension policy direction: Opportunities for stakeholder engagement.

From 2018, UFAAS in partnership with the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) and other partners, annually organizes National Agricultural Extension Symposia that bring together over 200 different actors and stakeholders to deliberate on AEAS issues critical to agricultural development. The First National Agricultural Extension Symposium 2018 was held in March at Hotel Africana in Kampala, as one of the final activities of the Integrating Gender and Nutrition within Agricultural Extension Services (INGENAES) Project that was implemented by UFAAS in partnership with the University of Illinois, in United States of America and funded by Feed the Future, USAID. The event with a theme **"Enhancing capacity and quality, promoting gender responsive, nutrition sensitive and professional AEAS in Uganda"**, was attended by over 190 diverse AEAS actors. At the end of the event, the actors agreed that this should be an annual event to enable them deliberate on AEAS issues that align the sector to contribute to agriculture and national development.

Hence last year, the symposium 2019 was held in March under the theme "Making Extension and Advisory services a transformative force in Uganda's Agriculture: What are the bottlenecks and game changers?" It was attended by a total of 214 participants (73Female, 141 Male) from over 24 AEAS providing organizations and related fields. The other partners that supported the event were: the Sasakawa Global 2000; Volunteer Efforts for Development Concerns; Makerere University; Farmers Media; Access Agriculture; Marula Consultancy Services; USAID Feed the Future, Techno Serve; and, the Swiss Agency for Development and Cooperation, plus individuals who sponsored themselves.

As a key consideration, emphasis throughout the symposium was placed on the need for AEAS actors present to disrupt the status quo and do business unusual in all relevant aspects such as; professionalism, accountability, partnerships among others, and to develop only resolutions that are respected. A communique on issues drawn from the workshop was developed and shared with MAAIF at the Joint Agriculture Sector Annual Review (JASAR, 2019), for which the outputs contributed to the NDP III.



1.3 THE NATIONAL AGRICULTURAL EXTENSION SYMPOSIUM 2020





Given the prevailing situation, this year's Symposium took a form of an e-Event, held around the country, at different times and carefully selected and coordinated venues, from 20th to 30th July 2020. Hence referred to as the e-Symposium Week, with the theme of "Positioning agricultural extension and advisory services for resilient agriculture and food systems". The e-Symposium hosted synergetic Webinars, discussions on different media channels, launch of the e-Registration for AEAS actors, among others. A week after the e-Symposium, UFAAS held its first ever e-Annual General Meeting (AGM). Both organizations and individuals participated through contribution of more ideas; attending to the different activities; sponsoring a pre-events and other budget items.

1.3.1 The Intentions of the Symposium

The purpose of this year's symposium was to provide space for the different AEAS actors and stakeholders to deliberate on how AEAS can effectively and efficiently contribute to national agriculture and food systems, amidst the natural calamities of Covid-19, floods, landslides, desert locusts and others. Since these or their impacts are likely to stay on for long, there is need to understand, and come up with strategies on how the AEAS should position itself in this new situation, if it is to remain relevant. The objectives of Symposium 2020 were to:

The objectives of Symposium 2020 are to:

- 1. Find out how the disruption and shocks of the natural calamities have affected the agriculture and food systems in Uganda.
- 2. Find out the different coping and thriving strategies adopted by the different AEAS actors and stakeholders to ensure that they perform.
- 3. Identify the new opportunities manifesting out of the disruption and shocks of the natural calamities.
- 4. Come up with recommendations for priority changes within the "new normal".

The Planned Sub-themes that will inform the main theme are:

- I. Climate Smart AEAS-Capacity and needs of actors;
- 2. Mainstreaming Sustainable Land Management in AEAS;
- 3. Youth Engagement in AEAS and Agri-preneurship-as providers or clients;
- 4. Emerging Competitive e-extension Models
- 5. Public and private AEAS for Animal and Fisheries Sectors
- 6. AEAS support to Urban and Peri-Urban Agriculture

The other proposed presentations in line with main theme are:

- 7. Positioning of Agricultural Extension education for resilient agriculture and food systems
- 8. Experiences of agricultural inputs provision with extension Services
- 9. Farmers Perspective on the effect of the current vulnerabilities

The expected outputs were

- · A report on the positioning of AEAS for resilient Agriculture and food systems
- Different Extension approaches, practices and models presented and discussed
- At least I policy brief and/or a communique
- · Capacity of participants enhanced in the different thematic areas and use of e-platforms
- Networking and information Sharing
- E-Registration of national extension actors launched and operation

The **intended outcome** of the symposium is to see the position of AEAS strengthened within resilient agriculture and food systems throughout the country and beyond.

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1.3.2 The process of the event

The National Agricultural Extension e-symposium was conducted using a rich and broad range of e-participatory methodologies and in phases. The methodologies included: webinars, radio jingles, radio talk shows, WhatsApp discussions and regional hub meetings. The phases included: Preparatory or Preliminary; opening, webinars and publicity events; synthesis of results, climax and closing; evaluation, report, communique and policy brief writing and presentation to different stakeholders:



PHASE I: Preparatory or Preliminary phase (25th May-19th July 2020)

This involved publicity and mobilization of resources and participants at regional and national levels for the different planned activities.

| Table I: Prep | paration phase | of the S | ymposium |
|---------------|----------------|----------|----------|
|---------------|----------------|----------|----------|

| Activity | Methodology |
|---|---|
| Planning, Orientation/ coordination of the various activities (Webinar and e-meeting hosts, media, etc), | Local Organizing Committee meetings |
| Resource Mobilization | Phone calls, E-mail communications and physical visits |
| Registration of participants for the different activities and different regions (including those that had already registered) | E-mail communications and Whatapp postings, with links |
| Developing of different mobilization and publicity materials (adverts and drama clips, articles, TV and Radios clips) | Developing formats and scripts |
| Publicizing the developed materials throughout the country | Media engagements throughout the country |
| Preparation of Paper presentations, etc | Engaging the proposed presenters, forming a presentation review team. |
| Postings on relevant websites (eg former Symposium reports, presentations), | Review and editing of the materials |
| Phase one e-registration of the already verified AEAS actors | Sharing the e-Link and follow-up |
| Establishment of regional hubs in Mbarara, Arua, Lira, Gulu, Tororo and Iganga | Engaging MAAIF-DAES, DPMOs and regional UFAAS members |
| Identification and training of registrars in selected districts (that will be ready) | Engagement of the identified/ recommended district registrars + online training |
| Capacity building hosts and presenters on use of ICT platforms | E-mails, e-meetings |

PHASE II: Opening and Webinar Events (20th -28th July 2020)

The second phase of the symposium was characterized by a series of webinars, meetings and media engagements on different sub-themes, indicated in the table below.

Table 2: Second Phase of the e-Symposium

| Activity | Methodology |
|--|--|
| Official opening of the e-Symposium, and launch of the E-registration tool | Physical meeting at the MAAIF Minister's Office televised and linked on Zoom |
| Discussion of general thematic issues by wide range of actors and stakeholders | Regional Radio Talk Shows and Radio Jingles and reportings on the National TVs |
| Presentation and discussion of Sub-Themes and selected papers | Webinars |
| Synthesis of all the pre-event results | Write-shop |

PHASE III: Climax and Closing Event (30th July 2020)

Similar to the opening, the closing event that was a workshop held at Eureka Hotel and Hotel Africana, with livestreaming that allowed other participants to attend virtually. It marked the climax of the e-Symposium 2020. Table 3 highlights the main activities of this event.

Table 3: The climax of the e-Symposium

| Activity | Methodology |
|---|--|
| Synthesis of all the pre-event results | Write-shop |
| Presentation and discussion of the symposium Closing outputs/ Products/ Communique | Presentations, Video clip, Panels discussions, poling and Speeches |
| Feedback from the actors and stakeholders (including donors) | |
| Evaluation of the Symposium | |
| Closing of the e-Symposium | |

PHASE 4: Post Event (After 30th July 2020)

To conclude the event well, the communique will be disseminated to the stakeholders and action followed up immediately. UFAAS also conducted its Annual General Meeting.

Table 4: Preparation phase of the Symposium

| Activity | Methodology | |
|---|-------------------------|--|
| Evaluation of the e-symposium | Survey Monkey package | |
| Report writing plus communique and policy brief | Write-shop and meetings | |
| Presentation reports to various stakeholders | M | |
| Annual general Meeting | Meetings | |

Table 5 summarizes the activities that characterized the e-Symposium

| Activity | Main Activity | Methodology |
|--------------|---|--|
| 20 July 2020 | Opening event | Physical Meeting and Webinar |
| 21 July 2020 | Webinar I: Climate Smart AEAS-Capacity and needs of actors | Webinar with moderators and panelists attending physically |
| 22 July 2020 | Webinar 2: Mainstreaming Sustainable Land Management in AEAS | Webinar with moderators and panelists attending physically |
| 23 July 2020 | Webinar 3: Youth Engagement in AEAS and Agri-preneurship-as providers or clients | Webinar with moderators and panelists attending physically |
| 24 July 2020 | Webinar 4: Emerging Competitive e-extension Models | Webinar with moderators and panelists attending physically |
| 27 July 2020 | Webinar 5: AEAS support to agriculture and food systems for and within the Urban and Peri-Urban Settings | Webinar with moderators and panelists attending physically |
| 28 July 2020 | Webinar 6: Aligning of the extension and advisory services Experiences of agricultural inputs provision with extension Services Farmers Perspective on the effect of the current vulnerabilities | Webinar with moderators and panelists attending physically |
| 30 July 2020 | Climax and Closing event | Physical Meeting and Webinar |



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1.3.3 Participation

The e-Symposium was attended by different categories of extension actors who participated through various channels, which were: physical meetings, zoom meetings, and socio-media through (mainly Face book and Twitter) as per Table 6.

Physical Meetings:

The physical attendances were recorded during the: opening, webinar hosting and closing meetings by various extension actors and stakeholders at MAAIF and Hotel African respectively; and the moderators and panelists for the six webinars. Table 6 shows the physical attendance. The opening and closing meetings were officiated by the Hon. Minister.

| | Physical | | |
|---------------|----------|------|-------|
| | Female | Male | Total |
| Opening Event | 16 | 32 | 48 |
| Webinar I | 5 | 10 | 15 |
| Webinar 2 | 7 | 13 | 20 |
| Webinar 3 | 3 | 7 | 10 |
| Webinar 4 | 4 | 9 | 13 |
| Webinar 5 | 5 | 5 | 10 |
| Webinar 6 | 4 | 7 | 11 |
| Closing Event | 12 | 13 | 25 |
| Cumulative | 56 | 96 | 152 |
| Percentage | 37% | 63% | |

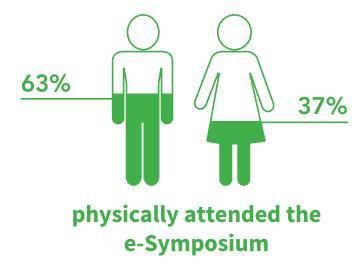


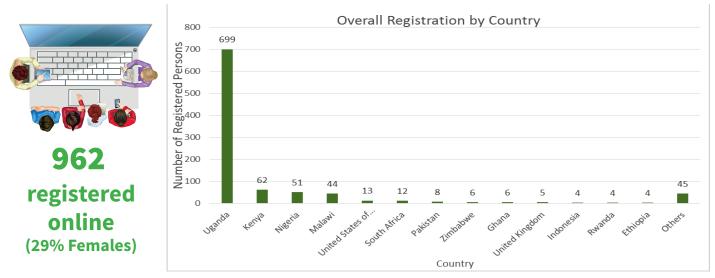
Table 6: Physical attendance of the e-Symposium

Zoom meetings:

Through a link, different actors from Uganda and beyond were able to attend the different sessions. However, the numbers of people who attended on-line is higher than what was registered in table (2) given the fact that many of upcountry actors were linking as a group.

A total number of 962 (29% females) registered online and attended the zoom meetings and webinars. Table 2 shows the attendances for each activity while Figure 1; shows the participation from the different countries.

Figure 2: shows Overall Registration by Country.

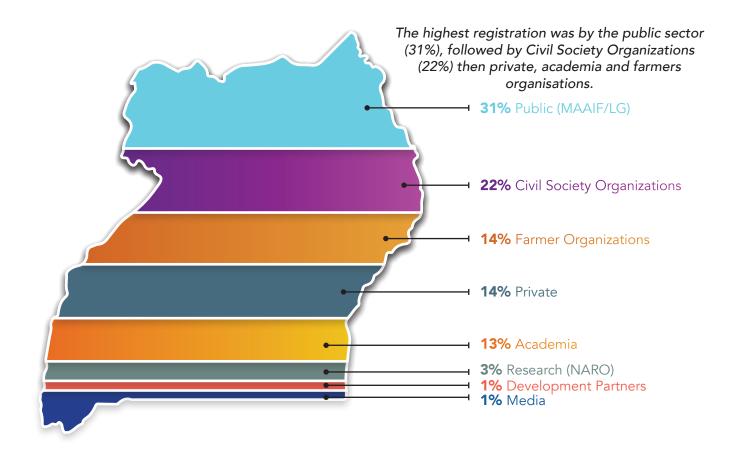


Kenya, Nigeria and Malawi registered the high numbers and this could be attributed to the presence of strong country chapters. The other countries included: Somalia, Israel, Ethiopia, Zambia, China, South Sudan, India, United Republic of Tanzania, Australia, Switzerland, Burkina Faso, Niger, Cameroon, Togo, Denmark, Germany, Comoros, Angola, Saudi Arabia, Hungary, Colombia, Belgium, Madagascar, Plurinational State of Bolivia, Afghanistan, Argentina, Mali, Benin, United Arab Emirates Republic of Korea.

Uganda Attendance by Sector

The symposium brought together AEAS actors from various sectors in Uganda and the attendance sector is shown in Table 7.

| | Female | Male | Total | Percentage |
|-----------------------------|--------|------|-------|------------|
| Academia | 19 | 70 | 89 | 13 |
| Civil Society Organizations | 46 | 111 | 157 | 22 |
| Development Partners | 4 | 6 | 10 | I |
| Farmer Organizations | 34 | 64 | 98 | 14 |
| Media | 3 | 6 | 9 | 1 |
| Private | 21 | 78 | 99 | 14 |
| Public (MAAIF/LG) | 50 | 167 | 217 | 31 |
| Research (NARO) | 9 | 11 | 20 | 3 |
| Total | 186 | 513 | 699 | 100 |
| Percentage | 37% | 63% | 100% | |



Socio-Media Engagements

Following the launch of the e-Symposium, hashtag #AgEXTUG2020 was created to create awareness about the event. Messages were shared with masses through various social media platforms such as Twitter and Facebook

WhatsApp:

Accounts of two organizations -Uganda Forum for Agricultural Advisory Services (@UFAASI3) and Makerere University College of Agricultural and Environmental Sciences (@MakCAES) were engaged to promote the event. Other usersorganizations and individuals participated in the event and contributed to the dissemination of the information. This report covers highlights from Twitter and Facebook of @UFAAS and @MakCAES for the period 20 July-9th August, 2020.

Facebook activity:

The webinars were broadcast live on the UFAAS Facebook page and posts shared on Facebook were viewed 18,400 times (12,400 times on Makerere Account, and 6,388 on UFAAS account). On the UFAAS Facebook page, the activity between July 13 and August 9 reached the highest number of users since the page was created, an increase in reach of over 1700%. During the Symposium period, the UFAAS page received 191 new followers and 135 new likes. (Baseline 474 and 483 followers and likes respectively).

Each day, an average of 1200 were reached (901 for Makerere University, and 299 for UFAAS). Information received from users ranged from requests for internship opportunities, how to become a UFAAS member, gratitude for streaming the webinars live, feedback to webinar content among others.

Learning's and recommendations in subsequent events:

Developing a social media tool kit ahead of the event would help increase visibility. The toolkit could include all speakers' usernames so that the online team can tag or mention them on Twitter and Facebook.

More participating organizations could actively share updates about the event on their official pages for greater impact and relevance. This could be done in liaison with their Communications Officers.

Twitter activity:

A total of 99 tweets were generated (48 on the UFAAS page, 51 on the MakCAES page). Generally, most tweet activity was observed in the 1st three days, and on the last day of the symposium. The tweets shared about the event were received 28, 028 impressions (number of times that Twitter users saw the posts) and the tweets received a total of 791 engagements (likes, retweets, or replies). Regarding the replies and quoted retweets, information shared by users ranged from: inquiry on dates, subsequent presenters, and tagging/mentioning of presenters of interest. The link shared to lead users to the webinars and related information was clicked on 54 times. (URL Clicks), while the official hashtag #AGExtUG2020 was clicked on 64 times.

The tweets engaged both national and international users. These include: @MAAIF, @Hon Vincent Bamulangaki Ssempijja, @ FAO Uganda, @FarmRadio, @KristinMkulima, @IFPRIMalawi among others. The UFAASTwitter account (@UFAAS) attracted 27 new followers in the symposium period (Baseline 296; current 323). The new followers include @NAADSSecretariat, @ FAOUganda, @UNYFA



2.0 PROCEEDINGS DURING THE SYMPOSIUM _____

2.1 OPENING AND LAUNCH OF E-REGISTRATION

The opening event of the e-symposium was hosted by the Ministry of Agriculture Animal Industries and Fisheries (MAAIF) and the Hon. Minister (Vincent Bamulangaki Sempijja) was the Chief Guest. This combined physical meeting and webinar, that marked the beginning of the e-symposium, involving: key presentations: The keynote address (by Charles Ocici-Enterprise Uganda), UFAAS Survey on AEAS during the Covid-19 Lockdown (by Dr. Richard Miiro-MAK/UFAAS), and AEAS e-Registration process by Dostrim Ltd; a brief discussion involving online participants; and an official opening and launch of e-registration.

2.1.1 Key issues from the Key Note address

The keynote address on the "Positioning agricultural extension and advisory services (AEAS) for resilient agriculture and food systems" was given by Mr. Charles Ocici (Enterprise Uganda). The address focused on: Importance of Agricultural Extension and Advisory services, the Challenges to Extension and how best the AEAS can position itself. He emphasized the position of AEAS that has been compromised in this country because of the focus on production rather than productivity. This has eventually affected: the value the farmer accords extension; cost of production of raw materials; value of our agricultural outputs and eventually our competitiveness in the regional and global economy. Hence the need for the country to refocus on agri-extension once again.

His emphasis was that:

- There is no country that has succeeded in transforming its agriculture without sufficiently investing in the agricultural extension system. There is therefore need for a deep analysis of the AEAS challenges in order to understand.
- The disruption and shocks of the natural calamities and their effects on agriculture and food systems in Uganda.
- The different coping and thriving strategies adopted by the different AEAS actors and stakeholders to effectively perform.
- The new opportunities manifesting out of the disruption and shocks.
- And develop recommendations for prioritization within the new normal.
- Hence the relevance of this timely global event on positioning of AEAS in Uganda

2.1.2 Opening and Launch of e-Registration

MAAIF supported by UFAAS, developed and commissioned the process for e-registration and accreditation of AEAS providers in 2018. This was aimed at establishing a high quality, well-coordinated and harmonized pluralistic agricultural extension delivery system for sustainable development. Specifically, the e-registration process requires all categories of AEAS providers to register at the appropriate levels, in order to create a database of their profiles that can be used by government and other stakeholders. For this purpose, different registration forms were to be used; one for individuals and another one for organizations as follow: (Annex I A) for professionals, (Annex IB) for organizations, (Annex I C) for Practitioners and (Annex I D) for foreigners.

Currently, the Form A and B have been uploaded ad validated for use. By the time of the launch, 75 (38% females) individual AEAS actors had registered, the majority (48%) being public servants, followed by private practitioners as reflected in Figure 4. The graphs below show the registration by sector and district. This is because these made the majority of the UFAAS and MAAIF members who were mobilized for this phase of e-registration. The launch of the e-registration process for the AEAS actors in Uganda was signified by the Hon. Minister of MAAIF, Vincent Bamulangaki Sempijja registering himself as an AEAS practitioner.

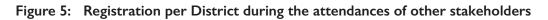


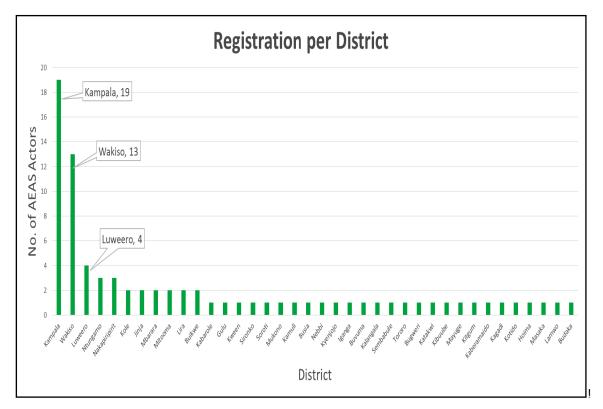


Statistics from the e-Registration database cont'd



Analysis of registration by district (figure 5) shows the highest being from Kampala and Wakiso for obvious reasons of the concentration of focal offices of most actors being within and around the capital city.





After this launch, the e-registration will be rolled-out to the districts after establishing a quality assurance mechanism that will be discussed at that level.

2.1.3 Key points from the Hon Ministers Speech

After the keynote address and launch of the e-registration process, the Hon. Minister of MAAIF, Vincent Bamulangaki Sempijja, gave the opening speech where he emphasized the following key points:

- Private sector playing a critical role in driving growth through constructive analysis of market demands at local levels.
- MAAIF / ministry to track the enactment of the Extension Bills to foster institutional compliance to policy provisions and strengthening weak institutional capacity.
- Government committing to further lobbying for consolidated financing for the AEAS system.
- Utilizing the extension grant to include capacity development and ICT equipment.
- Reducing taxes on ICT based equipment and infrastructure in agriculture.
- The need of broader approach to expand productive and capacity for sustainable development, poverty reduction and building resilience
- The need to develop systems that strengthen public accountability
- The 69% of Ugandan households that are still doing subsistence farming
- Building a strong and effective agricultural extension services is essential and probably a pre-requisite for establishing efficient food systems The Government committing to investments in building strong and business –oriented farmer organizations
- The National Development Plan (NDPIII) putting agro-industrialization at the centre of the industrialization agenda



2.2 CLIMATE SMART AEAS-CAPACITY AND NEEDS OF ACTORS

2.2.1 Introduction to Climate Smart AEAS

The effects of climate change are the recurring for instance; droughts, pest and disease outbreaks (including human epidemics) and market shocks. The need for climate-smart agriculture for millions of smallholders - many of them women and youth - cannot be overlooked: they provide over 80 % of food in Sub-Saharan Africa and make up the largest share of the undernourished. As the most vulnerable and marginalized, they are more exposed to climate change effects. The current global attention on climate change, food security and market driven smallholder production makes pluralistic agricultural extension and advisory services (AEAS) pivotal in the development agenda.AEAS are a fundamental part of Agricultural Information Systems (AIS) and shall support people to innovate in order to deal with existing and new challenges, to improve the livelihoods of rural people in Africa, Uganda inclusive.



It is now common knowledge that smallholder farmers are uniquely vulnerable to a wide range of disruptive shocks, from volatile markets to climate change. In the face of healthcare and supply chain disruptions caused by COVID-19, building farmers' resilience to such volatility is more important than ever. AEAS actors provide services to help farmers adopt optimal practices that build their resilience to these kinds of shocks. Yet, they are constrained by capacity needs and gaps that are systemic in nature and require multi-pronged solutions at the different levels.

2.2.2 The Discussions on the Climate Smart AEAS

The **objectives** of the webinar on climate smart AEAS were to:

- 1. Discuss the impact of natural hazards, including climate variability and change on the effectiveness of extension work.
- 2. Identify capacity gaps and challenges as well as innovations and coping mechanisms adopted by the different AEAS actors and stakeholders to adapt their practices to a changing climate and emerging threats.
- 3. Identify the new opportunities manifesting out of the disruption and shocks of the natural calamities.
- 4. Make recommendations for the enhancement of the capacity of extension actors to better deal with emerging hazards, climate variability and change as part of the new normal.

Dr. Silim Nahdy, the Executive Director of AFAAS, noted that climate change and variability is now widely accepted with far reaching direct and indirect impacts in Uganda and world over, and we have to ready ourselves. Extension workers are the frontline troops and have to even be more prepared to help farmers in responding to these impacts. AFAAS and all its country chapters are committed to help in responding to the impacts of climate change and variability as seen through their efforts of organizing this symposium. He called for a faster holistic interpretation and implementation of recommendations that come out not only in terms of policy but also institutional systems.

During the symposium various papers were presented as indicated in Table 8 below;

Table 8: Presentations for the Climate Smart AEAS under Webinar I.

| Topic Presented | Presenters / Organization |
|--|--|
| Climate Smart Agriculrural Extension and Advisory Services Capacity Needs(Local government context) | Dr. Kawooya Emmanuel DPMO SEMBABULE DLG |
| Climate Smart Agricultural Extension and Advisory Services: "What are the priority climate-change related capacities and needs of national and sub national extension actors amidst calamities | Mr. Galiwango Henry Makerere University |
| Climate Smart Agricultural Extension and Advisory Services: 'A climate smart village for effective CSA' | Dr.Anthony Egeru is a RUFORUM Secretariat, Uganda |
| Climate Smart Agriculture | Ms. Jalia Namakula , NARL Kawanda |

Note: The different presentations can be accessed at <u>https://ufaas-ugandacf.org/updates/get-all-presentations-made-3rd-e-symposium</u>

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2.2.3 The Interruptions due to Climate Change and Strategies laid by the CSA actors

The shocks and disruptions due to the current natural calamities (for example increased rain, floods, slides and Corvid 19) plus the strategies being adopted by the Climate Smart Agriculture (CSA) actors are reflected in Table 8

Table 8: Shocks and disruptions due to natural calamities and strategies adopted

| Disruption and shocks | Strategies adopted | |
|---|---|--|
| Arable Land affected: More land is becoming uncultivatable, less fertile and less productive. Crop destruction affecting food production in areas affected by floods, locusts and landslides resulting into mega food shortages | Continuous sensitization and capacity building to address the issues of arable land availability and the environment Proper planning, rationing | |
| Displacement of smallholder farmers due to destroyed homes and habitats hence increase in food and income insecurity Environment affected: | and use of available resources vis-à-vis already determined targets. | |
| Increased pests and diseases which resulted into increased use of pesticides and herbicides and this has negative impact on the environment | Use of local farmer institutions public-private partnerships, | |
| Market and prices | multi-stakeholder and interdisciplinary approaches | |
| Disruption of transport and market systems resulting at dropping of farm gate prices and hence income of farmers | Use of different ICT tools and strategies to improve on the | |
| Access to inputs and AEAS | access to markets, inputs and | |
| Limited/ delayed extension services, inputs distribution for production and agro- processing due to Covid-19 lockdown, floods and landslides. | AEAS | |

2.2.4 The Opportunities and Recommendations for Climate Smart AEAS

From what was presented, below are the opportunities that are emerging out of the natural calamities.

- Increased food production. The disruptions especially due to Covid-19 have made people move back to their villages and this has enabled massive farming activities. We foresee massive harvest in areas such as Northern Uganda. The areas that used to be uncultivated are all cultivated now and covered by crops
- · Improvement in disaster preparedness and increasing the agricultural budget
- Enhanced ICT innovation and use to reach farmers

The recommendations made by the presenters were:

- Prepare coping strategies through active involvement of different stakeholders and implement accordingly.
 Designing appropriate monitoring, evaluation and learning strategies to avert possible disruptions and shocks
 - Recognition of local food sources
 - Appreciation of multi-stakeholder interests especially grass root farmers
 - Mainstream CSA technologies in Integrated Development Plans (IDPs) at all levels
 - Increase opportunities for such forums (symposium)
 - Notification of all ICT innovations for CSA and promoting those that have tested effective.



Key Questions on CSA answered

QUESTION

How can extension workers' capacities in CSA be developed beyond the conventional training approaches through courses?

What measures can be taken for efficient use of water as a resource under climate smart Agriculture?

ANSWER

Through mentoring, hands on training, attachments to research stations and exchange visits and tours. Kenya for instance is highly advanced in fodder production and conservation technologies.

Promote low cost water harvesting technologies appropriate for the low level farmers.

How can the gap between extension agents and research be bridged? Some extension agents at times work against the new interventions but some completely have no access to information? By the researchers building the capacity of extension workers through joint planning and review meetings and establishment of on farm trials as used to happen during the ATAAS Project

Why are farmers not committed to adopting CSA practices despite their potential in improving production and productivity?

Farmers perceive CSA to be expensive. Once a smallholder can harvest something on the farm they will not invest in these practices. There is also need to improve on markets and produce prices so as to improve economic viability of these practices.

Why is extension failing to promote climate smart farming?

They lack some basic climate smart skills like early warning and climate forecasting, fodder production and conservation, grafting and seed multiplication, low cost water harvesting and irrigation technologies, food preservation and value addition technologies.

Conclusion

An inclusive approach to CSA is needed, one that empowers women and generally reflects on all genders and deliberately aims to involve the rural youth. An innovation system should be taken that not only encompasses introduction of new technologies but also advocates for behavioral change of CSA stakeholders.

Jalia Namakula



Adoption of drought Resistant and short maturity varieties and Afforestation

2.3 MAINSTREAMING OF SUSTAINABLE LAND MANAGEMENT IN AEAS _____



2.3.1 A brief on the Sustainable Land Management in AEAS

Uganda has a total area of 241,551 km2 of which about 46% is degraded and 10% is highly degraded (Magunda et al., 2004). It's estimated that 80% of Uganda's land is arable, but only 35% is being cultivated. The country's agricultural production system is diverse and spread within 10 Agricultural Production Zones (APZs), though the poor agricultural land management, increased extreme weather events, and population pressure have escalated land degradation in all the APZs. Generally it is estimated that 4% - 12% of GNP is lost from environmental degradation;85% of this from soil erosion and nutrient losses. However, the APZs experience varying levels of vulnerability to climate-related hazards (e.g. drought, floods, storms, pests and diseases) due to differences in biophysical, socio-economic and policy related factors.



Uganda's agriculture that is mainly rain-fed; relies on soils that are old [highly weathered] with little mineral nutrient reserves; and soil organic matter [SOM] for nutrients and good physical properties. Degradation of land resources is linked to population increase, climate change, poor land management (e.g. deforestation, wild fires), and poor implementation of policies including gaps and inconsistencies. Hence the relevancy of Sustainable Land Management (SLM).

SLM is the use of land resources, including soils, water, animals and plants, for the production of goods to meet changing human needs, while simultaneously ensuring the long-term productive potential of these resources and the maintenance of their environmental functions". SLM practice can either be : an SLM Technology (a physical practice that controls land degradation and/or enhances productivity, consisting of one or several measures); or an SLM Approach (ways and means used to implement one or several SLM Technologies, including technical and material support, stakeholder engagement, and other)

SLM is relevant: to global, international and regional Agreements, Protocols and Conventions; and at least 10 SDGs and specifically SDG 2 of zero hunger (soils, food production and healthy living). SLM fits into the Context of the African Union Agenda 2063 and the Africa we want as well as The Abuja Declaration 2006-(ISFM). At national level we have the Sustainable Land Management Strategic Investment Framework in (2010) aiming at scaling-up and mainstreaming SLM into national development agendas. Lastly, SLM is well fitted into the: National Development Plan III (NDPIII) 2020/21-2024/25 (sustainable land use and soil management) and The National Adaptation Plan for the Agricultural Sector 2018. The various papers that were presented during the second webinar on Sustainable Land Management are indicated in Table 9 below

Table 9: Presentations for the Sustainable Land Management

| Topic Presented | Presenters / Organization | |
|---|--|--|
| Mainstreaming SLM Practices in extension system in Uganda | Dr. Patience Rwamigisa-MAAIF | |
| Mainstreaming Sustainable Land Management (SLM) In Agricultural Extension and Advisory Services: SLM Benefits | Drake N. Mubiru (PhD), NARO | |
| Presentation of the National SLM Database http://www.ugacat.ug/ | Joy Tukahiirwa (PhD)-Uganda Landcare Network (ULN) | |
| Opportunities for Sustainable Land Management (SLM) Implementation at Grassroots level | By Bosco Ocan (Mr) Kitgum District Local Government | |
| What is WOCAT? | Nicole Harari, WOCAT Secretariat, Bern | |
| Tapping AEAS networks : Institutionalizing SLM into UFAAS amidst natural calamities" | Adeline R. Muheebwa -UFAAS | |

Note: The different presentations can be accessed at <u>https://ufaas-ugandacf.org/updates/get-all-presentations-made-3rd-e-symposium</u>

2.3.2 Shocks/ Disruption and Coping Strategies

Degradation of land resources linked to population increase, climate change, poor land management e.g. deforestation wild fires, poor implementation of policies including gaps and inconsistencies. The general impacts of climate change: floods, drought, storms, pests and diseases crop failures, and decreased yields but more is outlined in the table 10.

Table 10: Shocks and disruptions to SLM practices and strategies adopted

| Disruption and shocks due to the natural calamities(increased rain, floods, slides and Covid 19) | Strategies adopted | |
|---|---|--|
| Labour: Group labour constrained. hiring labour difficult | Increased adoption of SLM practices including: | |
| Inputs: Cost of inputs (seeds, fertilizers, farm tools, etc.) skyrocketed | • Use of legumes in crop rotation, mulching, Climate Smart Agriculture (CSA) terracing, biomass transfer, contour bunds; | |
| Markets:Many farmers have lost their most important buyers and major markets for | | |
| Plany farmers have lost their most important buyers and major markets for farm produce; No market surveys that inform small farmers and enable them to bargain better prices. | Use of Information and Communication Technology (ICT) and digital innovations for promoting technology uptake | |
| Accumulated agricultural produce with a low shelf life | including increased use of short message services (SMS), interactive | |
| Less access to extension: Most extension agents cannot afford current increased transport costs. | voice response (IVR), radio, TV, online marketing, and social media | |
| Reduced family incomes/ increased expenditures due to: | New approaches of influencing policies and learning | |
| Very low Farm gate prices remain and middlemen are taking advantage of farmers Reduced savings and loss of investment Many mouths to feed in villages due to heavy urban to rural migration | SLM-related institutional innovations for strengthening research-extension-farmer-industry linkages | |

2.3.3 Opportunities and recommendations

The general opportunities in the pluralistic Agricultural Extension system for SLM Mainstreaming are:

- Existence of supportive policies and guidelines.
- Presence of a network of committed extension workers countrywide.
- Well organized farmers' organizations at different levels can act collectively to reduce the impact.
- Increasing participation of the private sector offers an opportunity for increased investment in SLM activities. \Box
- Widespread Media coverage for information sharing and dissemination.
- Revamped Research-Extension-Farmer Linkage
- SLM technologies have been documented and disseminated (ULN86 SLM practices, published 39 and 41 are under review, WOCAT 50 SLM practices have been uploaded-partnerships are important)
- Increased use of ICT and digital innovations such as SLM database leading to (i) enhanced land productivity; (ii) improved livelihoods; (iii) improved ecosystem; (iv) reduced risk exposure; and (v) Increased efforts towards land degradation neutrality
- Innovative mechanisms in support for PPP partnerships for scaling up SLM and other agricultural programmes.



Conservation Tillage demonstration on a degraded farmer's plot in northern Uganda (By Dr Drake Mubiru-NARO)

The recommendations are:



- Scaling ICT 4 SLM through:
 - Digital assisted communication learning and networking
 - Capacity strengthening in digitization of agriculture including e-extension innovations, collective action in farming, marketing, and the rest of the value chain;
 - Promoting use of Online database and datasets towards scaling SLM across scales
- **Strengthened decentralized governance** mechanisms and institutions, policies and practices that empower poor rural communities to better manage their natural resources for food and income security.
- **Prioritizing linking institutions, promoting collective action,** capitalizing on synergies, complementarily and value addition while harnessing social learning benefits are among the project's core principles
- Fast tracking the extension bill
- Government led mobilisation of funds for SLM activities
- Using an integrated landscape management approach effective illustrating visibility of SLM practices and encourages farmers to work together.
- Integrate M &E system to track and monitor progress of SLM implementation



Key Questions or comments on SLM responded to

QUESTION

Thank you for a good presentation and explanation with good lessons. However, I am still at a loss since the challenges, benefits and even the lessons are portrayed as if they affect all gender groups the same. Any gendered aspects on this or they were completely ignored?

To Dr. Mubiru, thank you for your very informative presentation. I loved all the local examples you provided in Uganda. You indicated low adoption of some of the SLM practices by farmers. From your field experiences, what do you think are the major factors for the low adoption rate? and what can extension service providers do to make a difference?

Thank you all, - is there a web link where one can read more about UgaCAT database. Thanks.

Is Kumi district land degraded? I am requesting a team to contact me to carry out demo on groundnuts and citrus in Kumi in that regard.

I am agricultural officer from Kenya. We are recommended to follow this symposium. My question, is will we get the copy of the presentation rather the recording is followed through which link.

COMMENT

Dr Mubiru talked of the improvement in the herbage and fodder on the farm at Katonga but what i didn't click was the exact technique used actually at the mentioned farm that increased the pasture bio mass.

Farmers need to own the technologies as of their own other than taking them by a perspective of things forwarded them by the government hence its the duty of the government to carry on the task.

Gulu Regional HUB: Farmers also need exchange visits for learning purpose

2.4 YOUTH ENGAGEMENT IN AEAS AND AGRI-PRENEURSHIP

2.4.1 Brief on Youth Engagement in Agriculture

Agriculture has a high potential for reducing poverty levels especially for the youth (FAO, 2014) and engaging youth in extension and advisory services (EAS), both as providers and recipients of the services, can help address the employment challenge and contribute to economic development. This is because both the current farmers and extension staff are aging. The farmer's average about 60 years in age (FAO, 2014) and extension staff are often over 50 years (Ragasa et al., 2013).

Uganda is among the countries with the youngest population in the world, with 77% of its population being under 30 years of age (UBOS, 2017). Accordingly, UNFPA report of 2018 indicate that 8.8 million young people aged 15-24 are not engaged in education, employment or have had any training. The majority of the young workers in Uganda are engaged in the



informal sector largely agricultural related; 90.9% in the informal sectors, 5.8% are self-employed in business while only 3.2% in waged employment. Analyses further show that the youths are under-involved in the agribusiness due to limited add-on empowerment efforts, limited access to agri-finance, low numbers of influential youths in business and the seasonality of agribusiness activities that creates a repulsive force for youths and women in agribusiness.

The webinar 3 on youth engagement in agriculture was aimed at identifying youth in Agriculture Extension Advisory Services, challenges and discovery of opportunities which younger people can use for employment within the sector value chain.

Table 11 shows presentations that were made to reflect youth engagements in AEAS along agricultural value chain.

| Topic Presented | Presenters / Organization | | |
|--|--|--|--|
| National perspective | | | |
| Skilling youths for employment in agribusiness | Steven Kiwewesi - Bwasandeku Mixed farm | | |
| Youth in AEAS, challenges, opportunities and recommendations | Olive Nabiryo - Sasakawa Global 2000 | | |
| Youth experiences engagement in AEAS and agri-prenuership of NUCAFE | Deus Nuwagaba - NUCAFE | | |
| Experiences of Youth engagement in West Nile | Norbert Olaru - Omia Agribusiness Itd | | |
| Regional perspective | | | |
| Youth Engagement in Private Sector Extension: Lessons from Rwanda and Uganda | Dr.Richard Miiro - Makerere University | | |
| Regional perspective | | | |
| Experiences from the Agriprenuership Alliance | Dr. Anne Rouline | | |

Table 11: Presentations and presenters for the youth in AEAS

Note: The different presentations can be accessed at <u>https://ufaas-ugandacf.org/updates/get-all-presentations-made-3rd-e-symposium</u>

2.4.2 Shocks/ disruption and coping strategies

Table 12 shows identified Shocks / disruptions and Coping Strategies being applied AEAS while trying to engage youth in Agriculture

Table 12: Identified Shocks / disruptions and Coping Strategies applied

| Shocks and disruptions | Coping Strategies | |
|--|---|--|
| Reduction and demand for produce and inputs sale produce due to limited movement, difficulty in transport and abrupt closure of the borders | Encouraging all the youths to use of e-extension for accessing inputs, markets and credit access. | |
| Reduced provision/delivery of advisory services to/from the youth due to reduced demand for extension services among farmers | • The youth Extension staff at parish level also have demonstrations and do one on one extension delivery, the agents can also pass to other farmers | |
| Loss of income and for the youth companies dealing in input delivery services | Promotion of Radio programs where knowledge on various farming aspects has been aired, coping mechanisms, ideas on investment has been shared throughout the pandemic period. Some of the youths in AEAS have been provided with protective gear against COVID 19 to use during the delivery of extension workers to | |
| Difficulty in procuring inputs and in some situations, the cost of delivering services was high | | |
| Difficulty in accessing credit based on group lending since people were initially not allowed to meet to conduct saving against which they borrow. | farmers. NUCAFE has made sustainable coffee intensification systems of 3 meter by 1 meter, 3 acres in 1 acre, from 450 trees to 1333 trees in | |
| Lack of where to sale produce, and accessing big markets due to markets closure, became a challenge ,despite the bumper harvests among the youth for some crops such as Matooke (cooking Bananas). | one acre. Development of irrigation technologies, Farm level agro-processing, young people training other young people in the same, e.g washed processing ,Investment in Climate smart technologies attractive to the youth to reduce cost of production For marketing and exports there has been increasing women employment in the coffee value chain to increase on the export in quality and quantity. There is also door to door delivery of inputs to farmers and establishment of a call center established to ascertain order for inputs from farmers and make arrangement for delivery as well as Radio advert for the service delivery and extension | |
| Loss of jobs for the youth who were involved in training and skilling farmers and other value chain beneficiaries. | | |
| Consumption of Startup capital due to reduced income and loss of business | | |
| Loss of businesses and/or side income for youth involved in agriculture because some youth used to get income from Bodaboda (motorcycle hire), trading, which would be invested in agriculture. | | |
| | Shared by Dr. Godfrey Sseruwu and Dr. Barbara M Zawedde Mukono Zonal Agricultural Research and Developmer Institute (MUZARDI) | |

THE THIRD UGANDA NATIONAL AGRICULTURAL EXTENSION *e-symposium* 2020

2.4.3 Opportunities Available and Recommendations

The available **opportunities** for the youth engaging in agriculture are:

- The existence of a legal framework to guide the engagement of youth in agriculture.
- The digital orientation of the youth: Youth easily embrace ICTs in extension particularly use of social media to promote services and products, which is a big advantage in addressing many issues of the current shocks and disruption.
- · Some organizations have call centres to facilitate ordering for inputs from the youth in agriculture
- · Availability of online information and engagements
- Digitalization of services along the value chain has created opportunities of agents on the e-extension platforms for registering farmers, input delivery, providing advisory services to farmers, output marketing at a commission
- The ease of turning farms into family businesses to absorb the youth as employees.
- The availability of side businesses (like bodaboda as riders) for the youths act as buffers when the agriculture activities are affected are affected

The Recommendations are:



General to all youth:

- Subsidize internet services to ensure more access and use by the youth
- Identify, adopt, utilize and/or strengthen various tested models, approaches and platforms for e-extension to create more opportunities for youth engagement in agriculture. IT oriented. Digitalization of extension will enable more farmers to be reached in a shorter period of time. However, more research on their performance and guide future use of these tools, particularly for ensuring that the economically poor and traditionally underserved is needed.
- Intensify capacity building/ training of young extension agents on the use of e-extension ;Retool and equip them with ICT knowledge
- Have skills orientation to value addition, packaging, distribution services.
- Encourage, invest and work with Agribusiness incubation and skills development actors to create youth agri-preneurs, along the entire value chain
- Establish more or strengthen the existing call centres that are toll free so as to get information AEAS has to tap into digitalizing value chains, more agriprenuers, to speed up the provision of services, and making them reach the end users quickly
- Have a subsidized AEAS for the youth and marginalized; Retooling, re-organizing, redefining AEAS to have more agriprenuers that make value chain actors connect, and here the youth can play a very big role in the ag sector
- Promote youth Champions and Model Farmers approach

Differentiation among youth

- Lastly, there is need for implementers to differentiate among youth because they are heterogeneous and programs need to be tailored to specific vulnerable youth segments. These range from the poor rural youth without high school education up to the university leavers and employed youth.
- Ensuring that youths also have incentives-, for example short-term financial gains, and opportunities to become input suppliers provides a huge incentive for youths to become village agents.
- Non-financial incentives are often also important, such as improving one's social status and developing social networks. Village agents who are youths can be engaged to influence other young people through peer-to-peer exchange.

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Helping young women

- The need to always focus on gender differentiation so that the benefits do not go to only young males but ensuring that the unique constraints that young women face are addressed.
- The government and Donors should set / encourage incentives to implementers who monitor and meet gender targets. Additionally, young women could be engaged in suggesting ways in which they wish to participate in AEAS.

Strengthening public-private partnerships.

• Since any successful initiatives involve collaboration among different types of development partners, private companies, government, and development projects also need to partner effectively in Uganda's village agent models.

Key issues in the youth webinar

Today's youth generation is on the front line; it will have to cope with the effects of environment and climate change which are likely to accelerate and intensify during their lifetimes and those of their children.

Unfolding life histories of this generation and their offspring's will both track and strongly influence the evolution of economic, social and political developments through the decades.

Youth Agri-prenuership as key driver in transition towards sustainability and resilience in food systems

We need to find;

Evidence based solutions and models

Ways to deal with trade-offs that are inherent in attaining climate, biodiversity epidemics social and food systems.

Polls.

Reasons for selection of models: Scalable, sustainability, market orientation, technical skills, empowerment, competiveness, peer learning, direct benefits.

The .youth in Agriculture have a very great role in feeding the nations lets guide encourage them to position themselves for this noble role...Kamau Mary Malawi



2.5 THE EMERGING COMPETITIVE E-EXTENSION MODELS

2.5.1 Brief on Agricultural e-Extension

Agricultural electronic extension (e-extension) is the use of modern communication techniques instead of traditional agricultural extension. For example phones, computers and radios. According to Tarafdar (2018), electronic extension services in agriculture is a network of institutes that provide a more efficient alternative to a traditional extension system for agriculture, fisheries and natural resources sectors. It plays a crucial role in promoting agricultural productivity, increasing food security, improving rural livelihoods, and promoting agriculture as an engine of pro-poor economic growth. Tengli (2018) emphasizes that "the e-extension is having various dimensions, among them are timelines and quickness". As agricultural operations are time bound and uncertainty is always associated with it, in this context e-extension intervention are the fastest and reliable means of delivering extension services to farmers. And in future more farmers are



expected to use ICT hence it can be a best supportive tool for conventional extension system. Electronic extension can only be a means to seek information which is a valuable agricultural input but also in most developed countries and in few developing countries, ICT is used to order agricultural inputs from online agricultural stores. However, e-extension cannot fully overtake conventional extension service since research findings indicate that I majority of the farmers in developing nations are still inclined towards conventional extension system. The win -win situation is possible only when there is a balanced operational blending of e-extension and conventional extension methods.

In his opening remarks, the Executive Director for AFAAS (Dr. Silim Nahdy) emphasized that e-Extension is the way to go and is almost becoming a must especially during this COVID 19era because:

- The extension worker force is limited and cannot just reach each beneficiary, especially the farmers. Worse still the facilitation.
- The range of issues and challenges in agriculture has tremendously increased and a range of capacities are required to address them. The topics and needs of value chain beneficiaries especially farmers have become too wide that solely using traditional methods of extension may not be feasible.

Fortunately there are now tools and mechanisms that can facilitate access to services and goods by those who need them, without physically reaching them.

However, currently, the use of e-extension may pose challenges like cost (of data) to engage and availability of reliable network where the application uses internet. The content and its quality is another issue especially in the sub-Saharan Africa where regulation mechanisms are almost absent or not implemented.

For the e-extension to be feasible therefore, it should have a business component, and this way it has worked well like the e-wallet in Nigeria and other approaches in Kenya, Malawi, Uganda and other countries. During the symposium some of the e-extension models available in Uganda were exhibited and are indicated in table 13.



Table 13: The e-Extension Models presented during the symposium

| Company/ Organization | e-Extension solutions/ services |
|---|---|
| Access Agriculture | Agricultural training videos in local languages |
| Dostrim Limited | Early warning, Adaptation & Resilience - Adaptive Solutions for Sensors & ICT to extension workers |
| Ezy Agric (Endless farming possibilities) | It's data-driven, end to end mobile and web platform to collect and provide information for better services across the agricultural value cha |
| Famunera (Genuine quality inputs and market at your farm) | Leverages mobile technology to easily source and provide last-mile delivery of genuine quality affordable farm inputs to smallholder farmers in Uganda. |
| Farm Radio International | Packaged Radio agricultural extension messages to farmers. |
| Jaguza Tech U Ltd | Online and Offline livestock management system focused on empowering livestock production to strengthen food security using data science, Internet of things and big data |
| m-Omulimisa | Connects farmers to extension and insurance services via mobile phones while providing self-employment opportunities to rural youth |

Note: The different presentations can be accessed at <u>https://ufaas-ugandacf.org/updates/get-all-presentations-made-3rd-e-symposium</u>

The shocks and interruptions, strategies, opportunities and recommendations presented are outlined in the proceeding sections.

2.5.2 Shocks/ disruption and coping strategies.

Table 14: Shows Shocks and disruptions to e-Extension models and strategies adopted during the period.

| | Disruption and shocks | Strategies adopted |
|---|--|--|
| • | Reduced income for farmers- A strain on farmer incomes thus affecting their ability to pay back loans.Lack of capital | • Build farmers' financial credibility. |
| • | Extension services affected due to: Restrictions on gatherings and social distancing measures affecting ability to conduct training for village agents and also farmers viewing access agriculture | Splitting training sessions into smaller groups of participants in line with COVID-19 guidelines Sending individual farmers videos using WhatsApp Social distancing and wearing of masks. Delegation to on-ground vets doctors and extension workers Increased availability of videos at various key platforms that farmers can access, a few printed videos can be available at agro-input shops, where farmers buy seeds. Provision of services via agents |
| • | Increased gender-based violence. | • Work with the communities to prevent increased rates of gender-based violence |
| • | Inputs related Failure to distribute inputs due to restrictions in movement for all actors Diminishing access to quality inputs & advisory services | Door-to-door delivery of inputs by village agents using bikes and splitting framer groups into smaller groups at distribution sites Mobile-based demand aggregation for farm inputs for partner agro-input companies Increase on customer care services The 24 hours express delivery Logistical hub supplying inputs and aggregating outputs |
| • | Reduced Market | Support farmers to access markets Contracted large volume buyers of agricultural produce who subsidized the cost of use of monitoring tools for their farmers |
| • | Connectivity reduced farmers inquiries per day Un-reliable power connections Increased traffic on Information Platform Lack of credible data & records | Increased use of smart projectors, Access Agriculture is popularizing use of solar powered projectors; these can communicate to bigger groups of farmers with social distancing. Connect broadcasters to share experiences using virtual support. Use of biodata and GPS mapping of the farmland. |

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2.5.3 Opportunities and Recommendations

The available **opportunities** are:

- Wide appreciation of ICT4Agric. The biggest opportunity for those involved in promoting e-extension models is the fact that the COVID-19 lockdown made many agricultural value chain actors and beneficiaries (including farmers and AEAS actors) to realize the importance ICT4agriculture. One of them commented "it is no longer a talk, it is action" This has tremendously increased on-line activities and sale of services and goods, hence their sustainability.
- The conducive environment under supportive government policies and guidelines. Because of this, the ICT infrastructure (Internet, mobile, TV) is steadily improving. There is also availability of mobile money payments for agents for agribusinesses
- A big pool of youths within the Ugandan population that are ICT- savvy. The youth are easily engaged in ICT services, like supporting the delivery of inputs and transportation of produce, as an employment mechanism
- Availability of mobile linked applications for mobile-based extension services, subscriptions and follow up investment in agriculture, insurance for farmers, weather monitoring, market surveillance, etc. that can be used by the different service providers along the value chain.

The Recommendations are:

The presenters made the following recommendations:

- The Government should enable more extension actors and beneficiaries (farmers and others) afford ICT based services, applications and assets by subsiding smart phones, internet bundles, radios, Digisoft Smart Projectors, etc,
- The government and other stakeholders should build the capacity of AEAS actors in the relevant fields and applications of ICT4Ag in order to be effective and efficient in service and inputs delivery
- There is need to support and encourage adoption of the existing agricultural e-extension models, for example the ones that were exhibited during the symposium plus more, because they can allow extension to continue during disruptions.
- Government to reduce taxes on agricultural inputs and tools.
- Finance and insurance companies should invest into ICT agric-finance related applications and models, e.g. the agricultural sensors as it will support them in agricultural insurance.
- Communication services for rural citizens need to be an integral part of the extension and advisory system
- Promote enrolment in agricultural service courses to increase number of such services at village level
- Need to develop a proper system for: distribution of input provision, market information and linkages to markets.



Emerging Competitive e-extension Models



Some of the Question and Answers

QUESTION

To Access Agriculture I request you to guide me on your sources of the smart projectors. Where can we find these projectors in Uganda? What is the average cost per set, *from Gulu - Northern Uganda - Alfred Komakech*

ANSWER

These are available, kindly contact our office on 0392822410 or email grace@accessagriculture.org

To Farm Radio After the talk show, which techniques are used to engage with farmers to keep them engaged on the day's topic? And, What challenges and limitations are you faced with in reaching the target audience? *Vincent* Vincent, thanks for the question. After the show, farmers are engaged through the basic mobile phone by them answering poll questions, We provide a toll free line where they keep engaged with radio broadcasters, experts through our Uliza platform that is available 24/7 and on all mobile phone networks. We also provide farmers with radios handsets, they record the programs which they listen as a group. Community listening - group challenges

The Ezy Agric presenter how do you bridge the gap of farmers' illiteracy and ensure they have the needed skills to navigate your app and what other challenges? Looks like the problem is in adequate info due to limited extension workers or something, am I correct? -Prossy Isubikalu you face in reaching the farmers-*Viola Kirui*

For illiterate farmers they are connected to a village agent who is equipped with a smart phone that provide the services to them. For example an agent is supposed to handle a group 100 farmers.

To all presenters: Market disruptions. Some of the apps are in direct competition with input dealers- agrodealers, stockiest. The apps positively address the mile to input access by rural farmers. Do you work with agro-dealers as well? - Ana Mbatia. I think the market is too big to call this a competition.We are literally serving a fraction of the majority of farmers. Some of our business models might be in direct competition with agrodealers but I believe this competition is good for the farmer. If I provide inputs at lower prices than the local agro-dealer, the benefits are ultimately trickling to the farmer.

To m-Omlimisa Under E-extension we have seen the input providers. Could we have those that help in Marketing farmer produce too? E-extension provided to improve quality, quantity of produce but also avail a better market- *Wilber Munyaneza*.

M-Omulimisa provides access to better markets through formal MOUs with partner off takers. For each farmer group that receives our input loan, they sign an agreement to sell to our partner off taker

FAMUNERA is a motivating model especially the way farmers make orders and quickly get their services. Who are some of the key beneficiaries of these services especially in Mbale and Moroto for my crosscheck? *Godwin Michael Wantsusi*

We will share with you several contacts in those areas. Kindly get in touch on +256786224601 / +256758956755 or trade@ famunera.com

2.6 THE AEAS SUPPORT TO URBAN AND PERI-URBAN FARMING

2.6.1 Brief on Urban Farming

Urban agriculture (UA) is "the production, processing, distribution and marketing of food and other products in and around urban areas "for both food and income. It is suitable for those with minimal underutilized vacant spaces within and outside homes. According to the KCCA Urban Agricultural Ordinance 2006, "urban agriculture" means the practice of growing crops, aromatic plants, herbs, spices and ornamentals; and the rearing of fish, poultry and livestock for food, income, environment management and medicine in and around the cities, towns & urban environments; and includes the processing and marketing of such products.

The advantages and opportunities of UA are that it: enables urban dwellers to produce and have access to cheap local food; generates income for small scale farmers, processors and marketers; provides easy reach to



both input and output markets within or near their locality; and affords easy access to household/institutional biodegradable waste for use as feed for animals or manure for crops. Urban farmers find rain water harvesting easier due to the existing infrastructure. They are organized, and have easy access to micro-finance and other services.

UA is a recognized sector globally and in Uganda. d Dr. Seruwu (MUZARD) underscored the issue of UA thus, "urban farming is not just a trend, but a solution to food insecurity, malnutrition and unemployment in our cities and towns" However, UA is not without challenges, some of which are:

The subsistence farmers growing crops or rearing animals for food purposes: live in unhealthy environments (e.g. sharing small plots of land with plants and animals); use poor farming practices and rarely consult extension services; and poor or lack knowledge on utilization of food for good nutrition.

The commercial intended small farmers, processors and marketers face: theft; unpredictable weather pattern; pests and diseases; high cost of inputs (including difficulty to access feed and forage); minimal access to extension workers who are not well equipped for urban farming; complicated standards and certification measures due to the set up; and uncertainty of the places they use due to the expansion of housing and other urban infrastructure (affects sustainable planning).

Many urban farmers are not in groups yet extension coverage is limited. It becomes difficult for them to access extension services. As the urban areas expand in area and numbers, apart from KCCA, there is no legal framework for urban Agriculture in Uganda.





According to the Kampala City Council Urban Agriculture Magazine 2003, urban farming was recognized as a 'double-edged sword' with both nutritional and health as well as economic benefits. But despite this significant contribution, there was no substantive provision in the law that aimed at streamlining informal sector activities such as farming in urban areas. Underlying the practice of urban agriculture in Kampala was the fact that it was technically illegal. The bylaws banning the practice were enforced erratically, and had little impact on urban farming. Urban farming was also prohibited in 'high density areas'. 'High density' was unrealistically defined as an area with more than two households per acre of land, whereas in most Kampala neighborhoods had as many as 40 households on an acre of land. The 1964 Town Planning Act mandated the Local Urban authorities to enforce regulations for 'development control' in their areas of jurisdiction. In earlier years this Act provided the basis for Kampala City enforcement officials to harass those who carried out urban farming in the city, since the Act viewed farming as an activity at odds with the urban standards.

Although urban agriculture had no legal status in Uganda, city planners and national policy makers recognized its central role in the wider urban economy. In 1994, a section known as the Urban Agriculture Unit was established within Kampala City Council's (KCC) Production and Marketing Department.

In 2006, the Local Governments (Kampala City Council) (Urban Agriculture) Ordinance, 2006, a number of laws guiding urban farming were put into force. The major challenge thought is that as Kampala City expands, the implementation of these ordinances is a challenge, especially those concerning: application and inspection of premises prior to grant of permit or license; register of urban agricultural activities, prohibited areas, disposal or dump soil, toxic emissions and wastes, use of chemicals, display of cooked or processed foods and beverages for sale.

However, the Local Government Ordinances above, only apply to KCCA and therefore, all those practicing UA outside Kampala City have no legal framework for doing so. The current agricultural policy documents like the NDP III, Agricultural Sector Strategic Plan (ASSP) 2015/16-2019/2020 and National Agricultural Extension Policy (NAEP) 2016, are quiet on UA. Since there is no other law that can be cited, in case of any legal issue, the only law that may be applying to them is the 1964 Town Planning Act that prohibits farming in urban areas and worse still urban dwellers are not aware of this scenario.

There is therefore a need for a National Policy and legal framework on Urban Farming in Uganda



Courtesy of Dr. Godfrey Sseruwu and Dr. Barbara M Zawedde Mukono Zonal Agricultural Research and Development Institute (MUZARDI)

During the symposium different topics on extension and urban farming were exhibited and are indicated in Table 15.

Table 15: Presentations for Urban and Peri-Urban Farming

| Topic Presented | Presenters (Organization) | | |
|---|--|--|--|
| Public Extension Support to Urban Farming | Dr. Esau Galukande-Kampala City Council Authority (KCCA) | | |
| Urban Farming Technologies | Dr. Godfrey Sseruwu and Dr. Barbara M Zawedde (Mukono Zonal Agricultural Research and Development Institute -MUZARDI) | | |
| Extension Support to Urban Livestock Farming:A Case of Kyakuwa Dairy Model Farm | Dr. Jolly Kabiriizi (Kyakuwa Dairy Model Farm) | | |
| Experiences of Peri-Urban Farming | By Harriet Nkoobe (Rural Agro-Processors and Trainers Association -RAPTA-Iganga) | | |
| Youth Perspectives on Urban Farming | Dennis Kabiito (Uganda National Youth Farmers Association-UNYFA) | | |

Note: The different presentations can be accessed at https://ufaas-ugandacf.org/updates/get-all-presentations-made-3rd-e-<u>symposium</u>

The shocks and interruptions, strategies, opportunities and recommendations presented are outlined in the proceeding sections.

2.6.2 Shocks/ disruption and copying strategies

Table 16 shows the summary of shocks and disruptions to Urban Farming and the strategies the urban farmers and promoting institutions during the corvid 19 period.

Table 16: Shocks and disruptions to Urban Farming and strategies during the COVID 19

| Disruption and shocks | Strategies adopted |
|---|--|
| • Disruption of farmer's access to inputs. For example the livestock farmers could not collect fodder from the fields or plant new pastures which resulted into inadequate feeding, reduced milk yield & income. | Improving nutrition of animals by stocked adequate hay, haylage & silage before the lockdown, contracting a youth from Owino market to supply crop residues, increasing production of hydroponic green maize fodder and recycling farm waste into feed blocks and increased use of breweries spent grain as a feed supplement for milking cows. Integration of transportation logistics in production cycles/ on farms. |
| • Lack of markets/ reduced demand: Closure of public markets, restaurants, hospital & schools (some of the major milk market for urban dairy and crop farmers) affected the marketing resulting into losses to the already constrained farmers. | Digitalization/ automation of promotion and delivery methods: WhatsApp. chat groups; E-mails; Facebook & YouTube video clips), Newspaper articles,TV & Radio programmes; Telephone calls & SMS; Value addition, processing & marketing New business lines/ product linesdiversification |
| • Loss of other business: Some of the urban farms were benefiting from agro-tourism and sale of services, which came to a standstill during the lockdown. | • Expanding market share and rethinking on how to gain new markets |
| • Reduced Workforce: The larger Farms and institutions like MUZARD faced workforce absenteeism that affected their production and operations. | |
| Limited access to extension services/ engagement with clients due to limited movements | Support farmers to access markets Online extension service provisions- KCCA piloting a system Published a book ""Climate smart forages & supplemental feeds for dairy cattle under zero grazing systems in Uganda". Copies of the book are being sold online, through Jumia Applicatin Shifting attendance Encouraging following SOPs during visits |
| • Reduced budget: For those running Urban Farming as a project. | Alternative resource mobilization |
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2.6.3 Opportunities and recommendations by the presenters

- **General:** The Covid-19 lockdown has created an appreciation of urban farming where many urban dwellers are seeking ways of utilizing their compound to grow short term crops and rear livestock.
- **On-line services:** The availability and increased use of on-line services to acquire services, access inputs and sell products is a great opportunity for those, especially women and youths, who want to practice UA at a commercial level. "Online market place and delivery system has taken advantage of emerging trends i.e. telephone, SMS bookings"
- Inputs availability: The KCCA established Kyanja Agricultural Research Centre (ARC), that supplies quality inputs (assorted seedlings, kroilers, piglets, and both liquid & solid manure) which can be accessed by urban farmers. There are also many other technical agribusiness entrepreneurs who have gone into the raising vegetable seedlings for sale.
- **Capacity Development:** The training at Kyakuwa Farm in: making of Hay, haylage and silage; processing of garbage into feed; and related delivery services to urban farmers is an opportunity for youths to engage in livestock farming. For the UNYFA, the youth doing urban farming are being trained and promoted as change agents/trainers of others.
- **Funded Projects:** Some institutions like KCCA and MUZARD already have funded programmes that can support urban farming activities.
- The K-Smart Application that helps farmers to access KCCA services on mobile phone.

The recommendations by the presenters

- The pandemic policy should integrate food system resilience into their response.
- Develop capacity of AEAS for urban farming and related sectors like agro tourism
- Create a data base for agricultural & agribusiness service providers, for ease of reference for urban farmers in Kampala
- Setting up YouTube / online channels for continued information dissemination of urban agricultural technologies
- Set up model farmers in each Division of Kampala.
- Private sector should be encouraged to invest in commercial production of hay, haylage, silage & complete feed blocks for urban dairy farmers.
- Develop, package & disseminate simple training materials on production, feeds, health and entrepreneurship for urban dairy sector so as to harmonize messages to the farmers.
- Provide legal and facilitation support for urban farming operations since it provides training and other advisory services in the livestock sector.
- Strengthen linkages between private sector, farmers, extension officers & researchers to increase production and training of farmers on use of available resources (waste, water harvested, etc.)
- Training farmers on agronomic practices of economically viable crops and animals plus marketing aspects
- Immediate promotion of urban farming technologies and use of sustainable ecological system through partnerships
- Promote innovative online mechanisms for delivery of Research and Development (R&D) services like: real-data collection through virtual interactions; online delivery of quality inputs; and digital marketing.
- Training of farmers on use of available resources (waste, water harvested, etc.
- Urban authorities should include urban farming in the physical planning of urban areas
- Cities and towns should avail budgets for empowering women and youth to adopt urban farming technologies
- Development partners should support NARO to conduct adaptive trials and demonstrations for appropriate technologies
- Need for initiatives to support urban dwellers to access loans, insurance, and PPs, access to big buyers, government tenders etc.

bee keeping? - Samuel Luzobe

Can this be shared? - Zwide Jere

Some of the Question and Answers

QUESTION

To what extent do the ordinances address issues of

environment pollution such offensive noise and smell from livestock or poultry? Do urban ordinances allow

Does Uganda have a policy/act on urban agriculture?

ANSWER

sabinaofficial96@gmail.com I seem to observe that your interventions at KCCA are more concerned with production than issues of availability, access and affordability to food in Kampala City.What is your view on my observation?-Godwin Michael Wantsusi

We are also looking in value addition and marketing

Is there a minimum amount of space that one needs to profitably do urban farming in Kampala?-Christine KYAYONKA

You can start from I square meter

You Know many people in urban areas ease themselves (urinate) indoors at night either in toilets or buckets. For those who use buckets, they usually add some water, is that mixture safe for use in gardens or for irrigation?-*Hope Namara*

How many times should a farmer sprinkle the Indigenous Micro Organisms into the Pig Sty? Is IMO liquid? -ANDREW J.NSUBUGA Hope, urine for animals and people is often harvested to be used in agriculture. This can be used in making plant teas, fertilizers etc. but what you have to note is that you need to learn on how to make this plant tea. Urine often needs to be kept for some time before being applied to crops. Ethically, it may not be acceptable but once that urine is kept for about two weeks, it decomposes as release nutrients.

You may need to do it every two weeks but this may vary depending on the number of pigs. Yes it is liquid form and sold in bottles

UFAAS team... we are seeing most of the youth and organisations coming on board training farmers in Agriculture production... which plans do you have for protecting our farmers from being exploited by some unqualified people and NGOs which are in the name of providing agriculture extension advisory services yet they are not qualified practitioners and they are charging our farmers heavily?-Peter Byaruhanga. The e-registration and accreditation of extension workers is intended to address this issue

Very good presentations on urban agriculture. As we advocate for digital services and virtual interactions, capacity building in the use of ICT applications is still required even for extension and change agents!

Face to face methodologies are still relevant for fostering social and experiential learning. We just need innovative tools integrated with face to face methodology to attract actors across production-consumption continuum.

COMMENTS

- The Urban Agriculture extension approach is another best approach because like all the presenters of today talked its very feasibel. We need to forge a means of having regional training centres especially in the newly created cities and we register all interested extensionists and farmers. -Nuwasiima Saverino
- Urban farming is possible and should be encouraged, to improve food availability and good nutrition to urban dwellers. Starting
 small is beautiful. Many people in towns/ cities learned to grow their own vegetables during the COVID lockdown and a lot of
 vegetables are available and affordable- Royce Gloria
- Extension for urban agriculture like rural agriculture. is limited to production. I feel it is high time we provided both extension
 services and research in the access to, affordability and utilization of food. Processing and marketing of food are some entry
 points in that view. How this can work for the poor and marginalized is a question worth extension and research work.Godwin Michael Wantsusi- Design the literature on such farming, identify the extension staff to be trained as TOTs for the
 programme, train all the farmers and the extension staff on how to manage the farming practices. Encourage them to be in
 small groups where they can share ideas and get group training.

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2.7 ALIGNING OF EXTENSION EDUCATION AND ADVISORY SERVICES



2.7.1 Short brief/ presenters/ and general

The Directorate of Agricultural Extension and Advisory Services (DAES) strategic plan recognizes the need for strengthening the linkages with Universities, Agricultural Colleges and other tertiary training institutions that play a critical role in agricultural research and manpower development.

Still DAES envisions providing technical guidance to the Agricultural Training Institutions through collaborative curriculum reviews, student internships, and accreditation of agricultural extension workers, refresher training courses, and support to postgraduate training of extension officers as well as specialty courses for practitioners.

However the contribution of agricultural extension education institutions to national priorities depends on how they are aligned to the other actors in the Agricultural Knowledge and Innovation Systems (AKIS) system. In the past, Agricultural Education Extension and training has tended to be dislocated from the agricultural



development agendas and relied more on obsolete textbook knowledge. The growing public discourse about the relevance of education system to the national aspirations is forcing educators to rethink their contribution to society (BTVET, 2013; Kasozi, 2003). There is, however, no sector that is under pressure to show relevance of curricula than agriculture because of the large majority of the population that is engaged in farming/ agribusiness. Furthermore, the need for quality assurance in extension education is becoming more apparent due to the increasing number of universities and institutions that offer courses in agriculture, each with its own curriculum.

This presentation was therefore about the role of training institutions including Universities and Colleges in ensuring that agricultural education is relevant to the current market demands of agricultural and food systems. The presentation shows the limitations agricultural education institutions face, and points out what they need to do be relevant to the current changes brought about by COVID-19.

The main presentation on this topic was about "Realigning agricultural extension education to national priorities under the COVID 19 challenges: the case of Makerere University" by Dr. John James Okiror, Senior Lecturer, Department of Extension and Innovation Studies, Makerere University. The detailed presentation can be accessed at <u>https://ufaas-ugandacf.</u> org/updates/get-all-presentations-made-3rd-e-symposium.

The shocks and interruptions, strategies, opportunities and recommendations presented are outlined in the proceeding sections.



Extension Education: Courtesy of Dr. Okiror

2.7.2 Shocks/ disruption and copying strategies

Table 17: Shocks / disruptions and strategies adopted during Covid-19 Period.

| | Disruption and shocks | Strategies adopted |
|------------------|---|--|
| • • • • | The COVID-19 lock down affected students' internship placements and semester calendars Graduate research supervision were slowed down and funding priorities changed In private institutions personnel have been cut off the payrolls Student internship has not been conducted The educational institutions were closed Social distancing for gatherings affected group-based farmer training Pressures to develop online learning platforms etc (simulated practical's, retooling, how to raise University credits??) Supporting COVID-19 response activities (broken livelihoods and – how to support those who have reverted to agriculture as a livelihood) | There has been A shift towards online course offerings (Makerere University Electronic Learning and Education -MUELE, MTN learning platform) Training in simulated practical's |

2.7.3 Opportunities and Recommendations

The current **opportunities** for extension education are:

- Greater public-private actor engagement to find sector-wide lasting solutions
- Innovative ways to practical training of agriculture graduates (social distancing)
- Management of student internships (own projects & home farm improvement)
- Redevelopment of teaching farms (Can private sector participate?)
- Online teaching platforms and
- Strengthening actor connectedness with Extension Education Institutions

The Recommendations are:



- Greater need for interconnectivity of various agricultural actors (public, civic and private)
- Farmer friendly extension fact sheets versus ICT platforms
- Makerere University should in future set up regional centers for continuing agricultural education (post graduate and need-based training)



Key Questions and answered or chats on Extension Education

QUESTION

I am a local farmer and interested in improving my farming, how can we farmers outside the main stream education system get involved in extension education?(Charles Muzawula cmuzawula@hotmail.com)

ANSWER

You need to find a local farmers' organizations, or a nearby training center which trains farmer leaders to give some basic extension, however, you also will need to be certified in future to ensure you are doing the right thing

I believe extension comes through chain of education especially at secondary education? How will the numbers of extension agent be increased significantly now that Agriculture as a subject has been made optional, yet you are saying it an essential. (BENSON Ekwaro (bensonekwaro@gmail.com) Thanks Benson for this question, extension workers are trained at a post-secondary level, and during that training they are given all the necessary knowledge and skills to enable them to do a good job. We however, still have fewer number of students enrolling into extension service training, however more innovative and attractive plans are underway including paraprofessional training for the youth, so that we get as many people available as extension workers.

How often do extension workers gain new innovation and technologies?(Anonymous attendee)

t is recommended that extension workers are retooled every eason, or as and when a new need comes up, for example presently extension workers need to be trained in how to use CTs more, so immediate training is needed for this.

What can we do to motivate the extension worker because they have needs which change as one enters service and later on during carrier growth.(Tumuboine etumuboinegmail.com) This depends under what organization the extension worker is employed. Those under the public sector are presently supported under the extension grants, those under NGOs and private sector, I believe these can have various strategies to motivate their extension workers.



Extension education - A case of Bukalasa Agricultural College

Beatrice Okinyal Introduced Bukalasa as the only public college that currently trains students who go to the field as extension workers with the approach of teaching that is similar to Makerere University's though scaled down to Certificate and Diploma levels, both for 2 years.

She mentioned the practical driven model approaches of teaching used at Bukalasa including lectures, practical internships, field trips, & field attachments.

She revealed that Bukalasa Agricultural College has put emphasis on internships to develop practical skills of their students by first having an MOU with the various farmers who are able to host the students for 2 months. Other than Agricultural Extension Workers, Bukalasa also trains practitioners and their students benefit from external internships from Israel which help to bring out a college student who is seasoned with the science and skills in agriculture. The institution also attaches students to established farms for better exposure to latest farming techniques and technologies.

She encouraged youths to go for agriculture as the course of choice.

2.8 AGRICULTURAL EXPERIENCES INPUTS PROVISION WITH EXTENSION SERVICES



2.8.1 A brief on inputs provision in Uganda

The availability of quality inputs (in the required quantities coupled with timely delivery) is a critical factor for attaining production targets in the sector and is one of the biggest challenges faced by agriculture and food systems in Uganda. MAAIF has the mandate as a regulator of importers, manufacturers and distributors of inputs to farmers and other value chain beneficiaries. There are various efforts including policy measures that have been instituted to ensure quality of inputs are accessed in the right quantities and at the right time in Uganda. For example, one of the responsibilities related inputs ii to "Promote and coordinate the delivery of complementary services such as supply and quality assurance of inputs" (NAEP 2016). There is also the National Seed Policy aimed at ensuring increased production, availability, accessibility and affordability of quality seed and associated technologies to increase agricultural productivity.

From 2012- 2017, Feed the Future sponsored a project to ensure the availability of high-quality seed in the local market by joining forces with a consortium of Ugandan seed companies that agreed to use internationally accredited seed certification standards as part of a public private partnership.

The government's input distribution cycle through Operation Wealth Creation (OWC) and the National Agricultural Advisory Services (NAADS), entails three major steps, namely: planning, procurement and (contact) management, each of which involves series specific activities (OWC - SOP 2015). There other government agencies under Public, Private Partnerships (PPPs), handle their own inputs delivery systems, for example the Vegetable Oil Development Project (VODP). For the private sector, there are mainly two main for handling inputs: The Uganda National Agro-Dealers Association (UNADA) and the Uganda Seed Traders Association (USTA). Most of the lower Agri-inputs dealer's a member of one or two of these. Whatever the player, there is always need to work with extension for effective and efficient utilization of inputs.

During the Symposium the Government's main agencies involved in the distribution of inputs presented what they are currently doing. These are:

- the National Agricultural Advisory Services (NAADS) that is responsible for increasing access, by all categories of farmers to agricultural inputs for improved household food and nutrition security and household incomes
- the Operation Wealth Creation (OWC) that enhances household participation in community agricultural production through equitable and timely distribution of inputs and facilitation of agricultural production chains

The detailed presentations can be accessed at https://ufaas-ugandacf.org/updates/get-all-presentations-made-3rd-e-symposium .

Both of these government agencies outlined the shocks and interruptions of the current natural calamities and the coping strategies they have adopted, the opportunities that have emanated from the situation and also made some recommendations as outlined in the proceeding sections.

2.8.2 Shocks/ disruption and copying strategies

| Table 18: | Shows socks and | copying strategie | es for delivery of | inputs during the Corvid Era. |
|-----------|-----------------|-------------------|--------------------|-------------------------------|
| | | | | |

| Actors | Disruption and shocks | Strategies adopted | | |
|---------|---|--|--|--|
| • NAADS | Delay in submission of priorities by districts Limited outreach and training by extension staff Loss of income due to high perishability levels of produce and reduced market sizes/ opportunities Reduction or fall in prices of food items on the market leading to reduced re-investment capacity of the small holder farmers; hence limited expansion/acreage Relatively low survival rates (an average of 60%) for seed/seedlings provided due to Inadequate preparation by farmers Poor selection of beneficiaries Lack of follow up support through extension and training related services Quality of planting material Adverse weather conditions | Sought clearance to deliver inputs through the Ministry of Agriculture, Animal Industry and Fisheries Provision of maize, beans, vegetable seed, sweet potatoes, Irish potatoes and cassava planting materials in the short and medium term Foster partnerships and utilize the existing service delivery networks of key actors in the agricultural sector. Scale up agricultural production and productivity through provision of quality agricultural inputs, appropriate farm tools and promotion of community based planting and stocking material multiplication systems. | | |
| • owc | COVID-19, locusts, floods, landslides Lockdowns froze business operations of the RFSC and its partners Restrictions in movements meant that: agro-input dealers, manufacturers, suppliers could no longer replenish stocks at the RFSC Service providers (credit agencies, trainers, machine operators, repairers) could not operate Value chain actors could not access services | On-line ordering of agro-inputs and services (including extension services) | | |

2.5.3 Opportunities and Recommendations

The current opportunities cited by Operation Wealth Creation (OWC) are:

owc

- The Regional Farmers Service Centres (RFSCs) that are closer to the people and provide the unique solutions needed by the specific regions- This circumvents movement restrictions to a certain extent
- Digitalization of business processes and functions hugely enhances efficiency and reduces transaction costs.

The Recommendations are:

By NAADS

- Increase support for post-harvest handling and management, agro processing and value addition of crop and livestock products
- Promote local production of quality livestock feeds and feed conservation technologies
- Build reliable and sustainable agro input systems, value addition and marketing mechanisms
- Government to consider funding the NAADS COVID- 19 Response Plan for the short and medium term.

By OWC

- Let each regional agro-industrial park complex have within it a Regional Farm Service Center to provide the required agro-inputs and services to the surrounding value chain actors so that they can produce and supply to the agro-industrial park through collective action
- This is important in building a well-regulated decentralized last-mile agro-input distribution system and extension service provision system that will cause impact on a transformational scale



Inputs dealer shop: Courtesy of SAA



Question and answer session

QUESTION

How is NAADs prepared to address the issue of farmers requesting quantities of inputs through local governments and NAADS delivers less compared to what was requested by farmers. (Peter Byaruhanga pripe87@yahoo.com)

ANSWER

As NAADS, we only operate a limited budget and therefore not able to satisfy all the demands. We however encourage farmers to top up the quantities received from Government using their own resources. Enock Nuwabine nuwabine@ agriterra.org

On quality of planting materials, what plans are in place to assure quality of the inputs-quality assurance? (Higenyi James higenyijames9@gmail.com) Planting materials is a mandate of the Ministry of Agriculture, Animal Industry and Fisheries. NAADS therefore works very closely with the Ministry (Department of Crop Inspection and Certification) to assure the quality of all the planting materials well in advance of the season. The report generated then forms the basis for contracting the would be suppliers of the priority inputs

As we are promoting graduation of farmers from subsistence to commercial farming, how possible is it for a farmer to access maize milling machine? Thank you.

Farmers' capacity will increasingly be built to enable them access financial support services and to manage them accordingly

Enock : It appears the RFSC's replacing the role of NAADs. Is that so?

No, RFSCs are part of NAADS work. They are just a component of NAADS work

Good presentation Peter, just wondering RFSC will also cater for the acaricides?

Dear James, thank you for appreciating. Yes acaricides are catered for.

In the concept of Agro Industrial parks, is government envisaging developing Agro Industrial Zone in collaboration with development partners especially with China with whom Uganda has an MoU to do so?

Peter Muyimbo, sure agro-industrialization will partner with our excellent Chinese supporter

I would like to know the human resource ratio to farmer population envisioned for RFSC because regardless of the digital integration the human interface can't be avoided and how would this last mile services be achieved timely. @Anonymous Attendee

Digital integration compliments human interactions to boost efficiency

COMMENT

@Sylvester Dickson Baguma sdbaguma@gmail.com

I strongly believe that establishment of Village Agro-Supermarkets is the way to go. To take inputs closer to the people, opportunities for bulking for joint sales, access to information on markets, financial services etc, also with features of input traceability to minimize fake ones. I think NAADS should take up this model. We can start small and keep rolling out this model to the different villages. What do you think?

THE THIRD UGANDA NATIONAL AGRICULTURAL EXTENSION *e-symposium* 2020

2.9 FARMERS PERSPECTIVE ON VULNERABILITIES CURRENT EFFECTS _____



2.9.1 Brief on Farmers and the impact of COVID-19

Extension services play an indispensable role at the frontline of the response to the pandemic in rural areas. COVID-19 pandemic came at the time when some small-scale farmers were struggling with desert locusts and also amidst the pandemic, floods destroyed livelihoods of small-scale farmers in Kasese, Kisoro, Mukono and Mayuge among other districts.

It should be noted that the hardest hit by the effects of COVID-19 outbreak are the poorest, most vulnerable populations whose household incomes and food security are at risk. The current calamities have impacted onextension services yet the government focus on addressing COVID-19 pandemic is likely to delay the recruitment of more extension officers.

Farmers are the final beneficiaries or user of inputs at the production level. UNFFE'S mission is to organize and advocate for favorable policies and transform the farmers into prosperous communities. In June 2020, UNFFE conducted a survey in 8 districts of Uganda, sampled from the regions and its distribution gave a good picture of what the farmers had been experiencing during the Covid-19 pandemic.

During the symposium two organizations presented on the topic of "Farmers Perspective on the effects of the current vulnerabilities" were:

- I. Dr. Dick Nuwamanya Kamuganga, President, Uganda National Farmers Federation (UNFFE)
- 2. Mr. Baliraine Hakim, Chairperson of the Eastern and Southern Africa small scale Farmers Forum (ESAFF), Regional and Uganda, Representative of PC- FS Africa to the Global Executive Committee.

These presentations can be accessed at <u>https://ufaas-ugandacf.org/updates/get-all-presentations-made-3rd-e-symposium</u>.

The shocks and interruptions, strategies, opportunities and recommendations they presented are outlined in the proceeding sections.



2.9.2 Shocks/ disruption and coping strategies

Table 19: Identified shocks /disruption and strategies on farmer's perspective

| | Disruption and shocks | Strategies adopted |
|------------|--|--|
| As | reported by Uganda National Farmers Federation (U | NFFE) |
| and affect | te: The impact of Corvid 19 is observed both at production marketing levels. Generally small holder farmers were cted more than the general public would imagine. Horticulture, poultry and livestock most severely affected at both levels. Access to critical farm inputs like chemicals and planting materials and credit financing duction related challenges Input dealers who depended on public transport to restock their supplies could not move Ban on gatherings could not allow farmers' meetings to continue, trainings also made difficult. Farmers located some distance from the input dealers were challenged with travels. Those who do not directly live at the farm could not access their farms; travel restrictions. Notable increase in some input costs. Limited access to financial services like VSLAs. Market related challenges Consumption of milk and eggs in hotels reduced greatly and marketability dropped. Urban dwellers purchasing power has reduced and now only buy food to sustain life which has affected marketability for many fresh food products. Input costs increased due to travel challenges but output costs reduced due to lack of buyers. Absence of roadside chicken roasters greatly affected the market for broiler chicken, these provide a huge market | The Farmers' Organisations (FOs) has resorted to e-meetings for service delivery. Many small holder farmers have resorted to hawking their products especially eggs, milk and chicken. Readily dispose of their products on credit to credit worthy consumers. Those with small family vehicles have resorted to using them as market stalls on road sides. |
| As | reported by Eastern and Southern Africa small scale | farmers Forum (ESAFF) |
| • • | Few farmers have received support from the extension service provider as some of them fear visiting farmers.T Here has also been limited coordination between extension service providers Negative impact on: the access to agricultural inputs, marketing, the availability of the labor force at critical times of agricultural production and harvesting, and agricultural extension and other necessary services. Some of our members in flood-hit districts have not yet planted, and this further reinforces the impact of COVID-19. Increase in gender based violence in rural areas, women have suffered most as they have been deprived the access to extension service and information given the fact that they don't have direct resources to exchange for such services During the calamity many farmers could not sell their | We launched a campaign of planting five million trees on the world environment day to help mitigate the climate change related calamities. We have extensively shared approved information about COVID-19 with many of our members all over the country using radios and posters, translated in the language they understand. We are soon launching a study to assess the COVID-19 impacts on small-scale farming, food security and sovereignty in Uganda We I launched an online market application to be used on phones and website called KILIMOMART. It is found both on playstore and Website. This was to enable our farmers to access the markets outside their country or districts during and after this difficult periods. www.KilimoMart.com We gave out smart phones to some upcountry farmers fully equipped with internet and the staff trained them using the phones during COVID 19 |

2.9.3 Opportunities and Recommendations for priority actions

Opportunities identified

- More people taking up farming: Many people who left urban areas for the villages during the lockdown have resorted to farming realizing they had nothing else to do.
- A saving culture among the farmers: Covid19 has awakened farmers to start saving for the future and for emergency situations.
- Turning more to technology: Farming stakeholders have become more oriented to technology advancements as a way of ensuring service delivery.

Recommendations for priority actions during the "new normal"

By UNFFE

- Government should ensure proper management of the e-voucher system under Agricultural Cluster Development programme (ACDP) order to fully benefit the intended target at local level
- Prioritize investments in technology and research with regard to extension services delivery.
- Build the capacity of extension staff both public and private to be able to respond to farmers needs as a result of emergency.
- Support innovations in extension service delivery to ensure farmers are helped and establish farm service centers at zonal levels to ensure supply of essential inputs to farmers.

By ESAFF

- Improve coordination between extension service providers including public, private, NGOs among others to bridge the gap during this crisis
- Both government and private sector should be provided digital tools and technologies to enable information flow despite physical distancing and mobility constraints.
- Carry out a timely assessment of COVID-19 impacts on small-scale farming and identify the specific challenges, needs of small-scale farmers and make recommendations
- Use local government structures to provide adequate and accurate information to smallscale farmers about COVID-19 to reduce fear and stigma.
- The Government should provide social protection for small-scale farmers and as well build linkages between social protection and insurance schemes
- National Metrological Authority should develop a simple whether forecast information APP which can be accessed not only by smart phones.
- Government should improve on its early warning disaster management systems which should be known by everyone.
- The Government should allocate more than 10 per cent to the agriculture sector and precisely support the recruitment and equipping of extension officers all over the country.

2.10 THE STAKEHOLDERS ENGAGEMENT ON RADIO TALK SHOWS



During the e-symposium, three radio stations were engaged, that is Central Broadcasting Service Ltd (CBS), Kaboozi Ku Bbiri and Radio One 90. The proceedings of the engagements with the first two radios are highlighted in the sections below.

2.10.1 Central Broadcasting Services (CBS) Limited`

This was done in partnership with the National Agricultural Advisory Services (NAADS) programme. The topic was Agricultural Extension and Advisory Service in Coffee Value Chains amidst COVID -19. The host was Mr. Alex Nsubuga-Central Broadcasting Station (CBS), while the panelists were: Mr. Joseph Nkandu (Executive Director, National Union of Coffee Agribusinesses and Farm Enterprises (NUCAFE) and Ms. Adeline Muheebwa (Vice Chairperson, UFAAS).

General Brief on NUCAFE: The National Union of Coffee agribusinesses and farm Enterprises (NUCAFE) is an umbrella National coffee farmers' organization with a membership of 213 farmer cooperatives/ associations with 1,512,210 individual coffee farmers in 5 (five) coffee growing regions in Uganda. NUCAFE has grown and evolved as a vibrant private sector led farmer organization formed to serve and position farmers well in the liberalized coffee value chain in Uganda. NUCAFE has empowered and organized smallholder farmers using the farmer ownership model to assume more roles and functions within the coffee value chain and provide enhanced profitability at each node of the coffee value chain.



The shocks/ disruptions, strategies, opportunities and recommendations that were discussed are highlighted in Table 20.

| Table 19: Identified shocks /disruption and strategies on farmer's perspective |
|--|
|--|

| hain he coffee plant spacing has een reduced from 3m by 3m previously recommended) etting 450 seedlings per acre o 3m by 1m getting 1,333 eedlings per acre; in order to prease coffee production per nit area earning over Ug-Shs 0 million per year after 4 | NUCAFE provides training on improved farming methods at farmer fields for those interested. | Promote family coffee businesses and succession planning so as to address the increased youths' unemployment and their exodus to towns for motorcycle riding. Government should establish youth's incubation centre's in coffee businesses across the country to is successed on the planning of the |
|--|--|--|
| een reduced from 3m by 3m previously recommended) etting 450 seedlings per acre o 3m by 1m getting 1,333 eedlings per acre; in order to prease coffee production per nit area earning over Ug-Shs | on improved farming methods at farmer fields for | planning so as to address the increased youths' unemployment and their exodus to towns for motorcycle riding. Government should establish youth's incubation centre's in coffee businesses across the country to |
| ears of establishment. | | increase youth's engagement in coffee value chains especially access to vital business information, business knowledge, networks, financial investments and other resources fundamental to the establishment and growth of the coffee enterprises. |
| lany farmers have engaged in vater for production practices uch as use of irrigation to nprove water availability uring drought. | Increased yields have increased profits and improved farmers' capacity to cope with drought. Increased farmers engaged in coffee production. | • Extension service providers should ensure that the farmers practice SLM especially in water conservation and soil fertility improvement to avoid floods and protect the environment. |
| Farmers have joined hands to form cooperatives or associations to establish processing and value addition facilities for product diversification which has increased the profits by 2/5 compared to selling of the raw beans. With the farmer ownership model, farmers are able to set the price and negotiate for greater gains from the value addition processes of coffee. Previously Ugandan farmers were getting UgShs 8,000 for IKg of coffee beans compared to what is sold in UK at 20 pounds (UgShs 80,000). | There are emerging coffee processing facilities established by farmers one in Namanve Industrial and others emerging are in Masaka, Rakai, Sheema, Kabarole, Kasese, Bunyagabo, Kapchorwa Farmers are able to identify better foreign markets for higher gains and avoid being exploited by brokers. The increased profits have improved the farmers' resilience to cope with natural calamities and transform the farmers' lives. | The new extension system has to provide specialized training packages to value chain actors. The training will provide special coffee labels, group strengthening in governance, entrepreneurship and compliance to quality standards in order to meet the new changing market demands that require elements of traceability, digitization and geographical indication. This will create increased marketing opportunities and create sustained gainful coffee markets. The emerging coffee processing factories have potential of generating new jobs that can absorb the youths. Hence there is need to target youths for employment in the factories. Promote the "farmer ownership model" empowers the farmers in the coffee value chain which is being promoted by the new Coffee bill and the National Coffee Policy. Communities need to be sensitized on this new Coffee Bill and Coffee Policy. The new extension service system should be continuously provided with market information on specific commodities so as to provide real time market information |
| Agricultural Advisory Se | ervices | |
| lsed the other modes of ommunications including nline meetings e.g Webinars, oom meetings and radio talk nows in central and regional ubs. | Wide reach of participants: The online sessions attracted over 100+ participants in-country and internationally per webinar providing a broad range of input. Use of radio: The radio programmes were aired in different languages which attracted participation of farmers and other value chain actors. | UFAAS should build capacities of members to increasingly engage in use of online mode of communication. UFAAS should establish innovative modes of communication to engage the members in the regional hubs and other actors towards improved EAS service delivery. Develop an UFAAS communication strategy to guide the various modes of communication in line with the overall Government of Uganda agricultural strategy. |
| om nlir .oo nov | munications including ne meetings e.g Webinars, m meetings and radio talk vs in central and regional | d the other modes of munications including he meetings e.g Webinars, m meetings and radio talk vs in central and regional s. Dust of radio: The radio programmes were aired in different languages which attracted participation of farmers and other |

2.10.2 Radio Akaboozi - Ku Bbiri Kampala

This was done in partnership with two member organizations of UFAAS: Volunteer efforts for development Concerns Organization (VEDCO); and the Association of Uganda Professional Women in Agriculture and environment (AUPWAE). The topic was "Gender and agricultural extension services amidst COVID 19". The panelists were: Grace Babirye, programme Officer-VEDCO and Dr. Eve Lutalo, Chairperson-AUPWAE).

General Brief: The unexpected emergence of COVID 19 disrupted both the activities of farmers and extension workers alike. However, due to culturally defined roles, privileges and expectations on women and men in society, it was also expected that they would be affected differently by the impacts of the pandemic. Consequently, farming communities as well as extension service providers had to reorient themselves in order to survive and perhaps even try to thrive amidst the lockdown imposed by government due to the pandemic. It was also an objective of the talk-show to create more awareness about UFAAS, in regard to its mandate, and the activities it was engaged in, in order to strengthen extension service delivery to address the gaps exposed by COVID 19.

The shocks/ disruptions, strategies, opportunities and recommendations that were discussed are highlighted in Table 21.

| Table 21: Summary of the discussion on gender and agricultural | l extension services amidst COVID 19 |
|--|--------------------------------------|
|--|--------------------------------------|

| Disruption and shocks | Different coping and thriving strategies adopted | New opportunities manifesting | Recommendations for priority actions the new normal |
|--|--|---|--|
| Limited access to markets and inputs especially for women who could not ride motorcycles and bicycles. These are often owned and used by men. In several cultures e.g. in the central region, it is regarded as inappropriate for women to ride bicycles. | NAADS setting up Regional Farmer Serving Hubs to improve their access to inputs and other services. | Increased use of ICTs for online marketing mainly done in the cities. | Extension workers should be empowered to provide gender- sensitive advisory services to ensure that the different needs of both men and women are appropriately addressed during such shocks. |

The key issues raised by the callers were

- Need for advocacy to reduce taxes on agricultural inputs
- Marketing efforts need to be strengthened to reduce the high risk of price fluctuation for agricultural produce
- The upsurge in counterfeit agricultural products should be equally curbed.

2.11 CLIMAX AND CLOSING OF THE E-SYMPOSIUM _____

The closing on 30th July 2020, at Hotel Africana, marked the climax of the e-Symposium. This was presided over Director fo Agricultural Advisory Services, Ms.Beatrice Byarugaba, who represented Honorable Aggrey Bagiire, the State Minister of Agriculture.

2.11.1 Report on Covid 19 by SG2000

SG200 carried out a rapid electronic assessment (phone calls and email) to get information on the current and anticipated effects of Corvid 19 in the Agricultural sector. this was presented by Dr Nyamutale Roseline (SG2000) .mainly the study was to access the impact of Corvid 19 on the food systems, to establish how Corvid 19 situation and mitigation measures put in country are affecting the food system, to recommend a concrete mitigation measure and practical solution and finally to develop a Corvid 19 emergency project funded by SAA. 95 respondents participated in the survey across the 4regions: Central, Northern, Western and Eastern. Of the participants, 61 were male and 34 female. The average age for both male and female participant's was44.5years

The major areas affected as highlighted in the study are:

- The access to input and output markets, access to extension services, Reduced labor availability, reduced acreage, food and nutrition security and savings were affect as a result of the restriction on movement and gathering.
- There was also limited access to and choices of food, choice and food rationing, fewer number of meals at household level.
- Farmers limited access to credit and reduced access to information rated at 82%, price changes and reduced labor availability since most farmer's use labor banking as a source of labor.

During the lockdown farmers developed mitigation measures like continued cultivation reserving unsold food for home consumption, calling extension workers.

She further highlighted that SAA foundation had started an emergency project which will have an intermediate and long term project. The emergency project key areas are:

- Focusing on E-extension in partnership with M-Omulimisa, and intensifying work shops
- · Provided protective gears and develop materials to put on the platforms
- Provided seed and planting materials to farmers to ease food and nutrition security and savings
- Mitigation measures for access to input in partnership with Akorion so that farmers can access their inputs using the mobile phone.

2.11.2 Presentation: Synthesis / Results

Based on the presentations and discussions that came out from the different webinars on the disruptions on AEAS, a presentation highlighting the strength, weaknesses and recommendations for the AEAS system in Uganda was made by Dr Richard Miiro (Makerere University). Key results include:

- Presence of a multiplicity of AEAS actors –public and private actors across the country with increased levels of extension workers at local government levels by government
- · Increased use of ICTs in AEAS by many actors, bundling of input services markets and finance
- Climate smart agriculture and AEAS nodules and programmes promoted by both government and private sector to make sure that climate change doesn't out smart
- E-registration of AEAS actors is both a strength and an opportunity for quality assurance of AEAS services.
- The focus on Agro-industrialization will create a pull effect on various AEAS services across the Agricultural value chain
- · High population growth, this demands increased food production, extension services
- Lack of confidence, capacity of extension to deal with domestic challenges such as Gender based violence, farm succession
- · Pass the extension bill to institute and support implementation of proper AEAS
- There is limited coordination and learning among AEAS actors and duplication of services, therefore need for a Frame work to improve coordination
- Need for social protection in situations like the Covid 19, Extension can come out strong to support people to produce quick food in critical times.

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2.11.3 Remarks and inviting the GH

The closing remarks of the e-symposium was given by Ms. Beatrice Byarugaba (Directorate of extension) who was also the guest of honor, the Key closing remarks address focused on the themes and subthemes of the event which were directly in line with SDG2 and the strategic development plan in the NDP3. The key comments from the closing remarks were:

The need to practice agriculture in a profitable and sustainable manner to ensure competiveness so as to get out poverty and peasantry

- Deepen and emphasize Agro-industrialization so that the youth can get jobs, and also ease farmers businesses within their localities
- Increase production and productivity through research to develop appropriate technology that extension can transform to the farmers.
- · Need for extension service delivery to look at access to agro-processing and value chain addition to assure markets
- There is need to balance advisory services since the available ones deal in crop, there is therefore need for integration in using modules like the 4acre module
- Need for UFAAS or SG2000 to conduct a study to find out the number of non-state actors so as to help left the ratio
 of extension workers.
- UFAAS is key in bring coordination but its not strong enough there is therefore need for some development partners to come on board to build the capacity of institutions to coordinate.

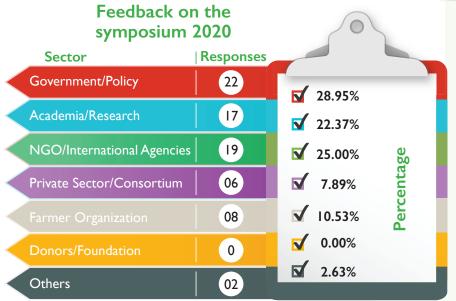


CLIMAX / OFFICIAL CLOSING OF THE E- SYMPOSIUM WEEK BY THE STATE MINISTER- AGRICULTURE



3.0 SUMMARY OF THE EVALUATION OF THE WHOLE EVENT

A feedback form was sent out randomly to 250 participants and 78 (30% female) were able to respond from the different sectors as shown in the table and figure below. Out of these, Ugandans were 60, Kenyans-7, Nigeria-3, Ethiopia -3, Zambia-I and SA-I. Most of them were from the Private sector, Academia and Civil Society organizations



However, only 31% felt that there was sufficient time for formal discussions in the sessions

Information about the symposium: Most of the participants got to know about the symposium through social media-48%, (Twitter, Facebook etc.), mailing list-30% and UFFAS Website and they rated the event as a very good

General view about the symposium: about 50% and more agreed that:

- They had sufficient internet connectivity to access and fully participate
- The online format of the webinars was good
- The length of each session was about right
- The presentation styles were engaging
- The presentations that were relevant to their work
- The event offered sufficient networking opportunities
- And the organizers were helpful and courteous over the internet

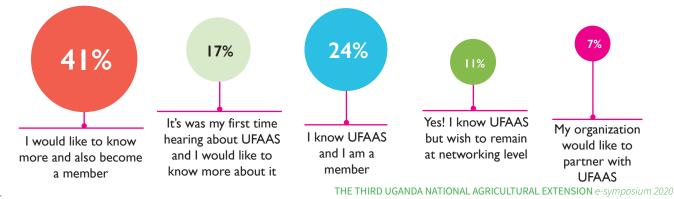
About future events: Most of the participants who responded (56%) preferred that the future events should be both physical and online and the table below shows their willingness to attend the event if it is to be held again physically or online. People are certain and more likely to attend online (93%) than physically (64%)

The other specifics responded to were on:

- Benefit from attending the Symposium (e.g. new connections, knowledge or other benefits)?
- Key take-away lessons for Climate-Smart agriculture
- How the online format of this year's event was
- The kind of sessions or topics for future symposia
- · Recommended improvements on the online format of this year's event

Knowledge about UFAAS

Concerning UFAAS, the main organizer of the event, the majority of the respondents were UFAAS members (24%) or wanted to know about it and become members as indicated in the figure below.



4.0 SYNTHESIS OF ISSUES FROM THE PROCEEDINGS AND PRESENTATIONS _____

4.1 WHAT IS HAPPENING

It was noted that despite the adverse effects of natural calamities due to floods, landslides, locusts and COVID-19, the following are happening within the agricultuaral sector or/and by the AEAS actors:

- 1. Promotion of improved agricultural support technologies and building capacities towards farming as a business to address the high pest and disease incidences due to climate change, resulting in increased use of pesticides and herbicides affecting the environment and increasing costs at production.
- 2. Promotion of the use of digitalization/ automation and e-extension for accessing quality inputs, markets and credit and use of Rural Farm Service Centers (RFSCs). This is to address the low survival rates (an average of 60%) for seed/seedlings due to the limited access to extension services as well as delayed extension service delivery experienced as a result of COVID-19 lockdown.
- 3. Several innovative initiatives to improve the nutrition of animals (production of feed packages such as hay, haylage & silage; hydroponic green maize fodder, alternative feeds from farm waste such as feed blocks and brewers feed) were developed to provide good supplement to livestock. This was mainly helpful to the urban and peri-urban farmers experienced restricted movements or failure to plant new forages due to COVID 19.
- 4. Majority of academic institutions are now shifting towards online course offerings (Makerere University Electronic Learning and Education MUELE, MTN learning platform), however there is need to build the capacity of staff in simulated practicals to address the slow-down in academic programmes due to the natural calamities as well as build capacities of the AEAS actors in gender sensitization to address the increasing cases of gender based violence.
- 5. There has been an unintended urban -rural shift in the population(due to COVID-19 restrictions) leading to increased involved in agriculture. Similarly, within the urban areas, there has been an increase in UA activities as a result of the lockdown.



4.2 EMERGING OPPORTUNITIES

Amidst the natural calamities, the following are the existing opportunities for AEAS:

- 1. A number of policy instruments and supportive legal framework for AEAS implementation, youths employment in agriculture and use of ICT based applications and infrastructure for easy access of AEAS services.
- 2. Existence of accountability mechanisms through use of the e-Extension diary for Agricultural Extension Officers, ongoing registration of AEAS actors and the existence of more than 4000 committed agricultural extension staff recruited countrywide and equipped with field cars and motorcycles.
- 3. Existence of professional networks like UFAAS that bring together diverse AEAS actors to promote information and knowledge sharing on different coping and thriving strategies, funding opportunities as well as promoting lobby and advocacy for EAS conditions to improve performance of delivery of EAS services.
- 4. More resources have been allocated towards the AEAS for example the establishment of an agricultural extension conditional grant that stands at more than Shs 100 Billion for both Wage and Non-Wage public extension workers and 100% funding of extension services in local governments by Government of Uganda.
- 5. Wide appreciation of ICT4Agric by agricultural value chain actors and beneficiaries (including farmers and AEAS actors), hence:- (a) providing an entry for promoting e-extension models; (b) emergence of new ICT innovations and models to address the challenges in bid to reach the farmers; (c) Media coverage for information sharing and dissemination to facilitate agricultural extension; (d) availability of online information and engagements; (e) use of online teaching platforms especially for academia and (f) increased use of ICT and digital innovations such as SLM database leading to (i) enhanced land productivity; (ii) improved livelihoods; (iii) improved ecosystem; (iv) reduced risk exposure; and (v) Increased efforts towards land degradation.
- 6. Increased participation of the private sector with offers for sector-wide lasting solutions including:- (a) increased investments in agriculture and emerging opportunities; (b) innovative mechanisms in support for PPP partnerships for scaling up CAS practices such as SLM and other agricultural programmes; (c) redevelopment of teaching farms for student internship placements and practical learning; (d) revamped Research-Extension-Farmer Linkage.
- 7. Digitalization of services along the value chain creating opportunities for agents on the e-extension platforms for registering farmers, input delivery, providing advisory services to farmers, output marketing at a commission, especially for the youths. Evolving of farms into family businesses as a strategy for youth's employment.
- 8. Existing established Regional Farmers Service Centres (RFSCs) that are within the communities to provide the unique solutions needed by the specific regions and established online and supply shops selling assorted agricultural inputs as well as more emerging community based nursery operators.
- 9. Innovative capacity development of CSA practices continue to be promoted amongst AEAS actors and wellorganized farmers' institution at different levels who are also learning to start saving for the future especially in such emergencies if they are to access AEAS services. As well as the existence of an online Sustainable Land Management Technologies (SLM) database.
- 10. Increasing demand by many urban dwellers seeking ways of engaging in agriculture as well as training of youths in diversified businesses using improved agricultural technologies.

4.3 RECOMMENDED ACTIONS FOR POSITIONING AEAS



Operationalizing the AEAS and related policy and regulatory framework

- 1. Foster compliance to AEAS policy provisions and enforce their implementation towards professionalism and accountability of the extension and advisory system.
- 2. Fast track the enactment of National Agricultural Extension Bill 2017 to foster institutional governance.
- 3. Strengthen the decentralized governance mechanisms and institutions, policies and practices that empower poor rural communities to better manage their natural resources for food and income security.
- 4. Define the role of private sector in driving growth through constructive analysis of market demands at local levels.

Strengthening public - private - producer - partnerships for effective AEAS service delivery

- 5. Addressing effects of natural calamities requires involvement of multi-stakeholder interests especially private sector companies, public institutions, producer organizations and development partners, .
- 6. Linking with institutions and promotion of collective action provides an entry for capitalizing on synergies and complementarities that facilitate learning and effective AEAS delivery.
- 7. Build linkages between social protection and insurance schemes to mitigate the effects of the natural calamities while promoting active involvement of different stakeholders to adopt and implement proven coping strategies.

Establishing Accountability systems

- 8. Scale up the online diary beyond public extension workers and fast track the registration of an online database for all AEAS service providers to improve the coordination and collaboration between various service providers.
- 9. Engage AEAS actors in the assessment of the AEAS system and measurement of outcomes to guide decision making or influence action.
- 10. Design appropriate monitoring, evaluation and learning strategies for joint application by the AEAS actors to avert possible disruptions and shocks brought about by the effects of the natural calamities for example implementation of SLM practices, application of early warning disaster management systems and other related climate change and environmental management related issues.

Mainstreaming ICT in AEAS institutions and operations

- 11. Institutionalize use of ICT within the extension and advisory system within the existing public and private institutions so as to provide adequate and accurate information to the diverse AEAS actors so as to promote continuous learning, networking and digital assisted communication for example use of toll free centres.
- 12. Facilitate the adoption of the existing ICT tools, ICT strategies and e-extension models to complement extension amidst the disruptions and shocks for example access to weather forecast information by National Metrological Authority through use of simple applications that can be accessed by ordinary phones and while off line.
- 13. Build the capacity of AEAS service providers and equip them with ICT knowledge and skills for effective and efficient AEAS service delivery across the commodity value chain segments, especially the young extension agents.

Engaging the Youths in AEAS services

- 14. Provide incentives to youths such as subsidies on agricultural based employment opportunities tailored to providing AEAS services for example input suppliers / village agents and youth specific models for example the championship model.
- 15. Provide skills and knowledge through training. Model farms should be established that create job opportunities for the youths along commodity value chains
- 16. Provide mentorship through the business incubation model in terms of innovative product developments such as production of quality livestock feeds and feed conservation technologies.
- 17. Integrate youth's engagement in all AEAS interventions and monitor targets disaggregated by gender to ensure that the different categories of male and female youths (illiterate and literate) benefit from the initiatives. This includes engaging youths in IT based

Mainstreaming CSA technologies

- 18. Promote an inclusive approach that not only encompasses introduction of new technologies but also advocates for behavioral change of CSA stakeholders, one that empowers women and deliberately involves the urban and rural youth.
- 19. Mainstream CSA technologies in Integrated Development Plans (IDPs) at all levels and promote the use of an integrated landscape management approach to effectively illustrate the benefits of SLM practices and encourages farmers to work together.
- 20. Promote Agricultural and digital technologies approach for CSA practice and the integration of climate information and eco-conservation technologies.
- 21. Design and prepare coping strategies and appropriate monitoring, evaluation and learning strategies involving different stakeholders to avert possible disruptions and shocks.
- 22. Promote collaborations with professional networks such as UFAAS for awareness creation, tracking progress and accountability on models supporting climate change and use of online database and datasets towards scaling SLM across scales.
- 23. Develop capacity building programs specifically to utilise climate –smart agriculture as an agent for developing resilience, mitigation and adaptation within the socioecological systems in response to the needs of AEAS actors. These include:-Training of field service providers within the institutions, developing technical expertise and capacity in institutions to champion models like SLM, E-extensions,
- 24. Lobby and advocate for increased funding for CSA activities and the integration of SLM concerns into institutions work plans and budgets.

Capacity building of AEAS Actors for an Effective system

- 25. Retool, re-organize, and redefine AEAS to have more agri-preneurs especially the male and female youths of all categories whether literate or illiterate.
- 26. Establish regional centers where educational institutions can offer agricultural education for technical training and needsbased training special programs. There is need to promote enrolment of youths in agricultural service courses to increase number of such services at village level.
- 27. Urban authorities should include urban farming in the physical planning of urban areas, cities and towns and include budgets for empowering women and youth in agricultural programmes.
- 28. Promote innovative online mechanisms for delivery of agricultural related services such as use of real-data collection through virtual interactions; efficient input output supply systems; online delivery of quality inputs; and digital marketing. As well as develop YouTube / online channels for continued information dissemination of improved agricultural technologies.
- 29. Develop, package & disseminate simple training materials on production, feeds, health and entrepreneurship for urban dairy sector so as to harmonize messages to the farmers.

- 30. Build the capacity of AEAS actors to be able to determine targets for proper planning, rationing and use of available resources; practice agro-tourism and use of sustainable ecological system; build strong and business-oriented farmer organizations and promote saving culture among producer organizations which are key tenets for agricultural transformation.
- 31. Strengthen Forums such as UFAAS to facilitate the support of the coordination of actors and increase opportunities for cross learning e.g symposium and joint resource mobilization for the diverse AEAS actors.
- 32. Support linkages between private sector, farmers, extension officers, researchers and other AEAS actors to increase production and productivity of the agricultural sector. Other vital linkages include access to affordable agricultural services such as financing, legal, insurance, mechanization services, market linkages and market information.
- 33. Strengthen the input and output management and distribution systems through provision of certified agro-inputs, trainings, farmer organizational services, value chain services and marketing platforms for different commodities across the value chains.
- 34. Establish agro-industrial parks in various productive regions of the country and promote the existence of Regional Farm Service Centres (RFSCs) in order to support the development of a well-regulated decentralized last-mile agro-input distribution system, provision of extension services and a market led system in compliance with the National Strategy for Private Sector Development (NSPSD) 2017/18 – 2021/22.
- 35. Explore innovative approaches in the management of distribution of agricultural inputs such as the e-voucher system under ACDP and Area Based Commodity Cluster approach under NAADS for scaling up.

Mobilizing investments in AEAS to support the functioning of AEAS

- 36. Promote investments in functioning of the AEAS system including recruitment and building capacity of AEAS service providers as well as funding priorities in technology, research and other support AEAS services such as access to financing, application of e-models, access to insurance and priorities in the COVID response plans. The current percentage share of 2.9% allocated to agriculture is far below the 10% 2014 Malabo commitment by the Government.
- 37. The Government should reduce taxes on agricultural inputs and ICT based equipment and infrastructure in agriculture to enable the economically poor access the services.
- 38. The Government should subsidize smart phones and internet services to ensure more access and use of ICT based services by extension actors and beneficiaries (farmers and others) especially the youth.
- 39. Invest resources in AEAS assessments in order to understand the position of AEAS and its challenges and impact of COVID-19 on small-scale farming to inform decisions.
- 40. Private sector should be encouraged to invest in commercial agriculture enterprises such as production of improved feed resources (Hay, Haylage, Silage & complete feed blocks) especially for urban dairy farmers.

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ANNEXES



ANNEX I: PARTICIPATING ORGANISATIONS

| Organization | Contribution | Brief on the Organization | Contacts (person, phone, email, website) |
|---|--|---|--|
| Enterprise Uganda | Positioning Agricultural Extension and Advisory Services (AEAS) for resilient agriculture and food systems. | lts mission is to empower entrepreneurship management skills to communities. | Buganda Road Kampala Uganda. |
| UFAAS Promote effective and innovative AEAS system through partnerships, advocacy, capacity building, information sharing and interactions in actors. | | Brings together agricultural extension and advisory services (AEAS) actors from all sectors | UFAAS (https://ufaas-ugandacf. org), AFAAS (www.afaas-africa. org and www.networking.afaas- africa.org) |
| MAAIF | Policy, Advocacy, Monitoring and evaluations | The stand of EAES in the country and engagement with policy supporting the sector development. | Ministry main offices in Entebbe, Wakiso District. |
| Jaguza | Using Mobile phone to engage the extension system among stakeholders. | Online and offline livestock management system focused on empowering livestock production to strengthen food security using data science, internet of things and big data. | infor@jaguzafarm.com, www.jaguzafarm.com |
| Farm Radio International | Communication services for rural citizens need to be an integrated part of the extension and advisory system and radio critical component. | The organization uses Radio as e-Extension supporting farmers in region. | estephen@farmradio.ord, @ farmradio, gplus.to / farmradio |
| Dostrim Ltd | Building farmers capacity- AEAS actors using sensors on their phones to reduce cost of production at farm level. | Its remote- farm logs model using sensors & ICT for early warning, adaptation & resilience. | www.dostrim.com support@dostrim.com 0785-595505 |
| EzyAgric | How to use ICT as platform collecting and provide information as service delivery across the value chain. | It's mobile and web platform collect and provide information for better service delivery across the value chain. | https://akorion.com/ |
| Access Agriculture | Developing researched videos, translated and uploaded on an open sharing platform for farmers learning and other actors. | Its devoted promoting effective agricultural training videos for benefits of farmers | Mr. Grace Musimami Country Ambassador. |
| Famunera | Free farming Advisory support and farm produce on the platform for sale to potential buyers. | It leverages mobile technology to easily source and provide last – mile delivery of genuine quality affordable farm inputs to smallholder farmers in Uganda. | www.famunera.com trade@famunera.com famuneratrade@gmail.com +256 758 956755 +256 786 224601 |
| m-Omulimisa | Providing platform for farmers with mobile extension services. | Provides access to improved seed, fertilizers, agriculture insurance through candled credit. | Ntinda; dnisiima@gmail.com |

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