Sweetpotato for Profit and Health Initiative (SPHI)
Sweetpotato Seed System and crop management Community of Practice (SSS-CoP)
Summary of online Discussion

TOPIC 18: Tapping ICTs for better sweetpotato seed systems

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Introduction

Several studies have shown that Information and Communication Technologies (ICT)-enabled platforms can improve farmer access to extension services, market information, financial services and inputs including improved seed. There are also efforts aimed at applying ICTs in seed systems for vegetatively propagated crops. For instance, the Seed Tracker developed by IITA is a comprehensive WebApp for seed value chain management, monitoring, evaluation and learning. It supports seed production planning, seed traceability (from production to end-use over generations and seasons), seed quality certification, seed inventory, real-time tracking of production fields, seed certification, marketing, information resources, geographic maps and map-based data navigation, and decision support tools.

On November 29, 2018 to December 18, 2018 the Sweetpotato Seed System and crop management Community of Practice (SSS-CoP) held an online discussion to explore ways through which ICTs can be tapped to strengthen the seed system value-chain. The discussion which was led by Srinivasulu Rajendran sought to answer the following questions:

a) Can the Seed Tracker app work for sweetpotato?
b) What innovative ICTs can we tap to improve efficiency of the sweetpotato seed system?
c) What are the pros and cons of ICT adoption in agriculture?

Tapping ICTs to improve the sweetpotato seed system in sub-Saharan Africa

Farmers need access to reliable information such as input sources, market prices, weather information etc. Experiences have shown that most smallholder farmers are operating in an environment where availability and flow of market information is very poor, greatly contributing to limited access to markets. ICTs can enhance access to agricultural information. However, for a smallholder farmer in the rural area application of ICTs will likely increase cost of production. This is because most of such applications are aimed towards linking the farmer to input and output markets but may not work if a farmer cannot produce at a 'scale' to meet associated costs. It should also be noted that not all farmers produce for the market. In that case ICTs can play a crucial role of linking farmers to new and appropriate farm technologies.

Developing applications that captures realities of the rural context i.e. semi-illiteracy, is a challenge which is possible to overcome through co-innovation. Such ICT intervention can be anchored on decentralized knowledge platforms for learning and exchange. Tanzania, through the Fast Track project, designed a Web App for linking decentralized vine multipliers (DVMs) with distant buyers. The App which can be accessed at https://arcg.is/0vOSfe will be expanded to include root buyers. A potential challenge is that majority of the targeted smallholder farmers do not have access to ICTs because of associated costs and literacy levels.

In Rwanda, the government in collaboration with partners has established ICT for Rwandan Agriculture (ICT4Rag) with an objective to increase agricultural productivity using ICT. This will be possible by developing a common user interface and a repository database for farmer and farm information; increasing the number of skilled and knowledgeable farmers; spurring job creation among youth in agricultural sector and peripheral services; improving and increasing access to agricultural information, knowledge and markets and, expanding access to and the uptake of rural and agricultural financial services. ICT platforms are just among the many enablers for successful agricultural value chains. ICTs in sweetpotato seed systems should promote empowerment, training and education as a transition to the requisite cultural shift, from top down prescriptive government directives to knowledge sharing, trust and transparency. Vines sale records for Rwanda in 2014 showed that 23.6% of buyers accessed information through road signposts which had telephone numbers. Buyers used the displayed telephone numbers to contact decentralized vine multipliers.

Use of ICT tools in agriculture in not new and many countries have made significant strides in this regard. WhatsApp is one of the social media platforms that is easy to use but also comes with challenges that face similar platforms e.g. low internet coverage in rural Africa, misuse (people sharing false information/spam information) etc. The social media messaging platform is changing the food conversation in India: https://www.nytimes.com/2018/11/23/dining/whatsapp-india-cooking.html. The platform has enabled Indian farmers and consumers to share information on products, markets, inputs, recipes etc.

Conclusion

New and advanced Information and Communication Technologies (ICTs) such as internet and mobile phones have tremendous potential to facilitate technology transfer to farming communities. However, for harnessing its potential; adequate facilities / resources such as mobile phones, computers and WI-FI should be provided. A proper orientation and training in using ICT tools should be given to government and NGOs district extension staff who will then sensitize and train farmers on proper use of specific tools. There is also need for promotion of rural electrification to enhance availability of electricity in the villages since access to electricity is associated with likelihood of using mobile phones.

ICT platforms can play a great role in improving access to information on various aspects of sweetpotato production including quality seed but require centralized moderation. This should be made as simple as possible for ease of adoption among rural farmers. For instance, a simple system

that let farmers with questions/queries be linked to other farmers to solve their problems through SMS communications.

Summary on the respondents:

Duration	No. of contributions	No. of unique respondents	No. and type of institutions	Number of countries
29/11/2018 – 18/12/2018	6	6 (4 male and 2 female)	NARIs: 1 CIP: 6	4 (Kenya, Malawi, Rwanda and Tanzania)

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